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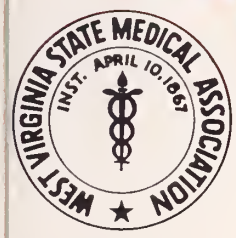
the West Virginia Medical Journal



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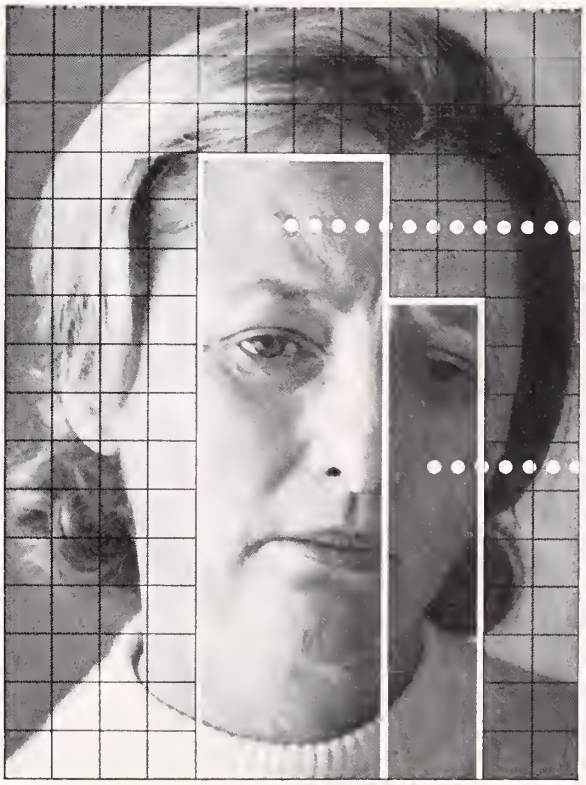

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in fr and/or severity of grand mal seizu require increased dosage of stanc convulsant medication; abrupt wi may be associated with temporar crease in frequency and/or sever seizures. Advise against simultan gestion of alcohol and other CNS sants. Withdrawal symptoms (sim those with barbiturates and alcoh occurred following abrupt discon (convulsions, tremor, abdominal cle cramps, vomiting and sweatin addiction-prone indlviduals under

espond to one

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ɜcause her problem,
ı primarily one of ex-
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Valium (diazepam)
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e are other advan-
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s pronounced and
ıis means that im-
nt is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium®
(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

ce because of their predisposi-
ituation and dependence. In
, lactation or women of child-
ge, weigh potential benefit
ssible hazard.

ns: If combined with other psy-
s or anticonvulsants, consider
harmacology of agents em-
ugs such as phenothiazines,
barbiturates, MAO inhibitors
antidepressants may potentiate
Usual precautions indicated in
everely depressed, or with latent
n, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

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JANUARY
1975

Vol. 71 No. 1

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

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Member 1975

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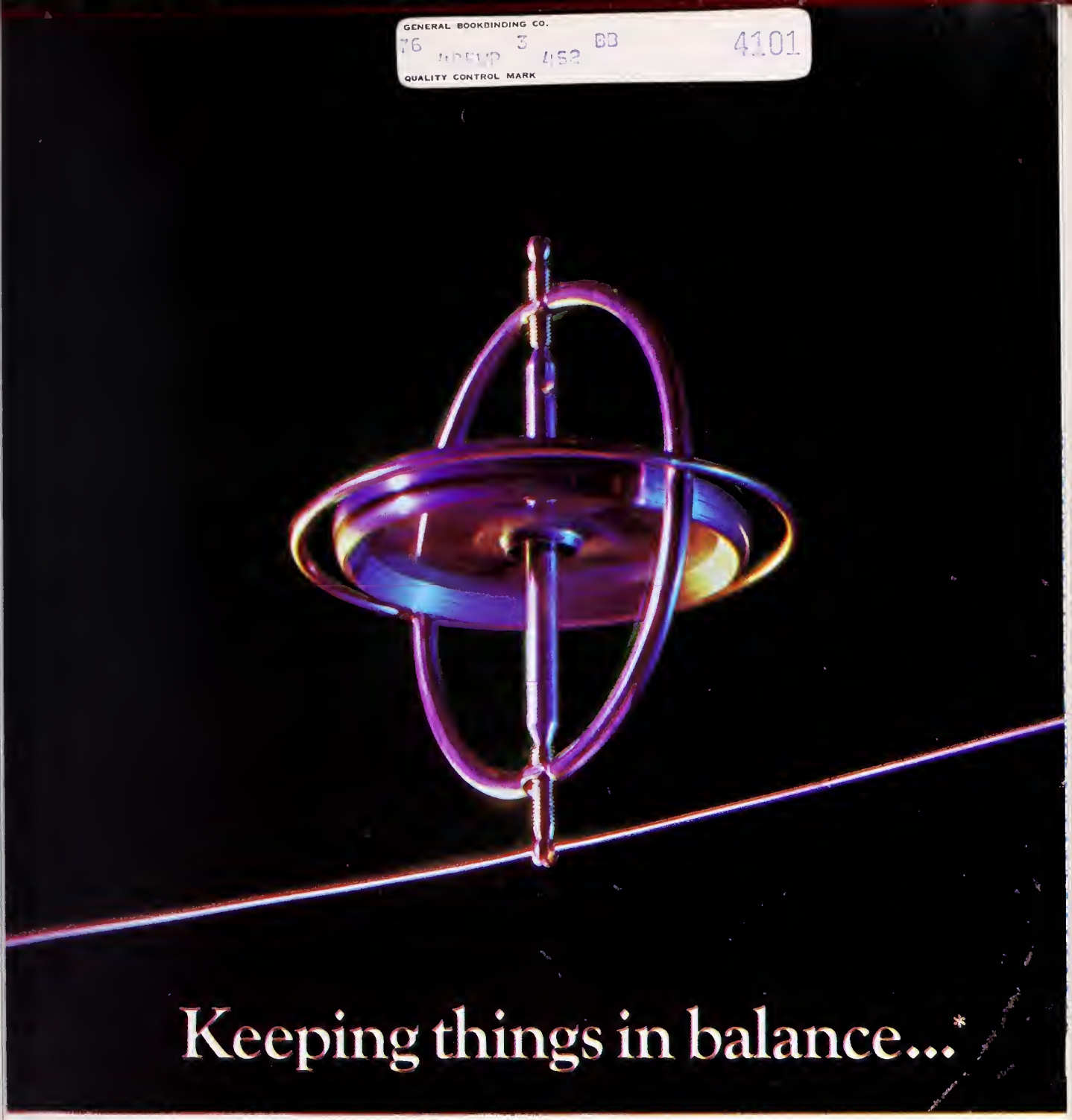

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*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

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The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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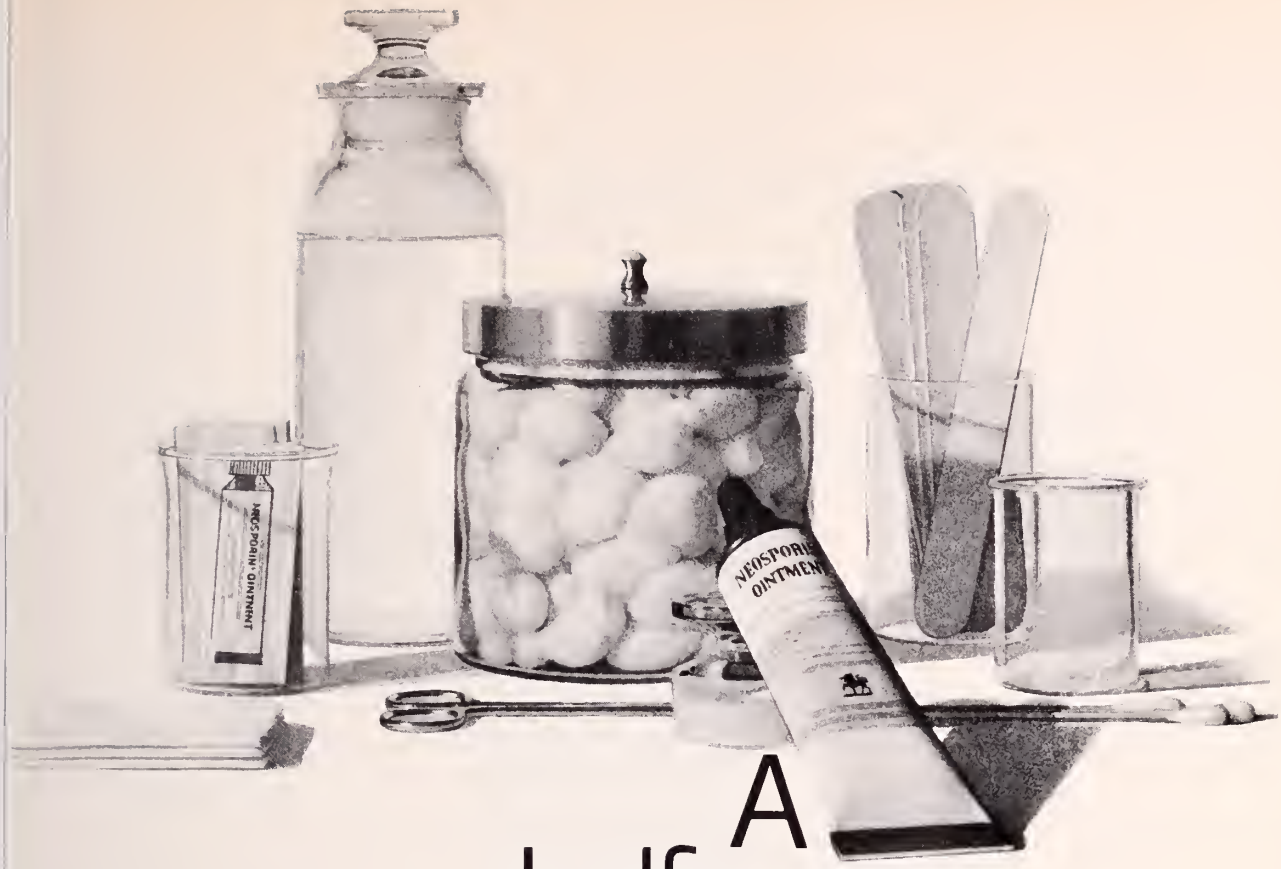

A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

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Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

NDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic ıerapy for topical infections, primary or secondary, due to susceptible organ-ıms, as in: • infected burns, skin grafts, surgical incisions, otitis externa primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • second-arily infected dermatoses (eczema, herpes, and seborrheic dermatitis) traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically,* the ointment may be used to prevent bacterial contamination ı burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts nd wounds accidentally incurred, its use may prevent the development of ıfection and permit wound healing.

ONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum ; perforated. This product is contraindicated in those individuals who have hown hypersensitivity to any of the components.

/ARNING: Because of the potential hazard of nephrotoxicity and ototoxicity ue to neomycin, care should be exercised when using this product in treating xtensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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The Role of the Detail Man

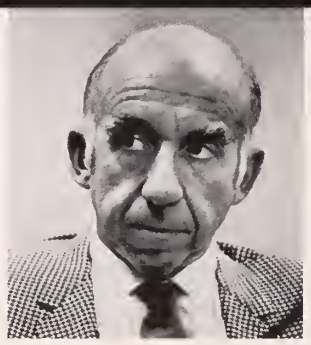
Opinion & Dialogue

"I may be prejudiced, but I am very much in favor of the detail men I meet. Most of them are knowledgeable about the drugs they promote and can be a great help in acquainting me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.

Dr. Willard Gobbell
Family Physician
Encino, California



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this country there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center, research people, and academic people have and that's in all likelihood on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

le a Source of Information?

Yes, with certain reservations. ; average sales representative ; a great fund of information ›ut the drug products he is re- ›nsible for. He is usually able to ;wer most questions fully and elligently. He can also supply rints of articles that contain a at deal of information. Here, , I exercise some caution. I usu- ' accept most of the statements l opinions that I find in the ›ers and studies which come n the larger teaching facilities. ›es without saying that a physi- ı should also rely on other rces for his information on ırmacology.

ining of Sales Representatives

Ideally, a candidate for the ition as a sales representative ı pharmaceutical company uld be a graduate pharmacist › has a questioning mind. I don't ık this is possible in every case, l so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

›acity they are indeed useful; ticularly in the fact that they seminate broadly based educa- ıal material and serve not just 'pushers" of their drugs.

Other Side of the Coin

Obviously, the pharmaceuti- companies are not producing all ; material as a labor of love— y are in the business of selling ducts for profit. In this regard ambitious and improperly moti- ed sales representative can rt a negative influence on the cticing physician, both by pre- ting a one-sided picture of his duct, and by encouraging the ctitioner to depend too heavily drugs for his total therapy. In se ways, the salesman has often torted objective reality and lermined his potential role as an ıcator.

Industry Responsibility

Since the detail man must be information resource as well as epresentative of his particular ırmaceutical company, he ›uld be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
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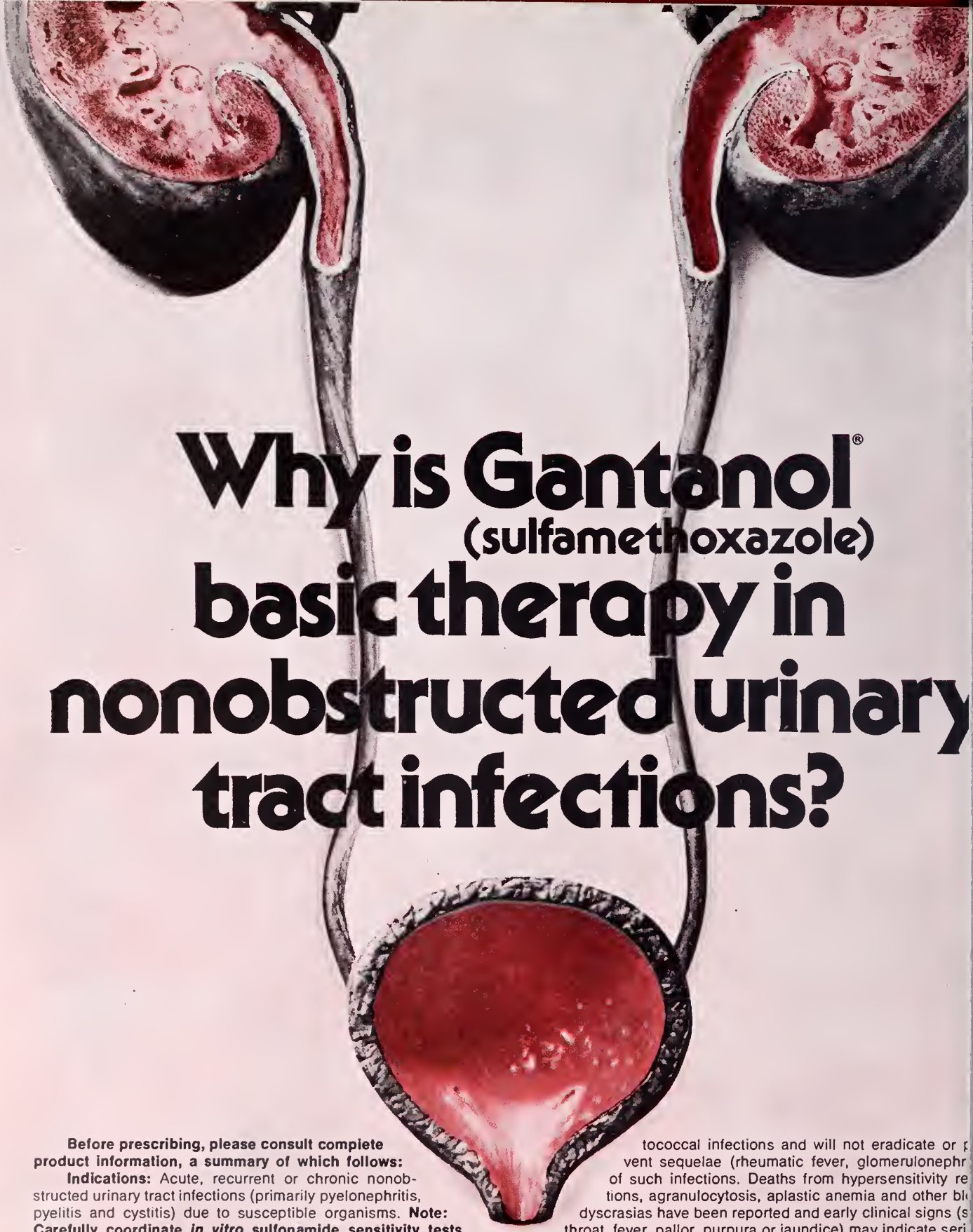

Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinary tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate or p
vent sequelae (rheumatic fever, glomerulonephr
of such infections. Deaths from hypersensitivity re
tions, agranulocytosis, aplastic anemia and other bl
dyscrasias have been reported and early clinical signs (s
throat, fever, pallor, purpura or jaundice) may indicate seri
blood disorders. Frequent CBC and urinalysis with microsco
examination are recommended during sulfonamide therapy. Insu
cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired rena
hepatic function, severe allergy, bronchial asthma; in glucose
phosphate dehydrogenase-deficient individuals in whom do
related hemolysis may occur. Maintain adequate fluid intake
prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, apl
tic anemia, thrombocytopenia, leukopenia, hemolytic anemia, p

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(sulfamethoxazole)

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(0.5 Gm) (0.5 Gm/teasp.)

ura, hypoprothrombinemia and methemoglobinemia); *allergic eactions* (erythema multiforme, skin eruptions, epidermal necrolyis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anahylactoid reactions, periorbital edema, conjunctival and scleral njection, photosensitization, arthralgia and allergic myocarditis); *astrointestinal reactions* (nausea, emesis, abdominal pains, hepatis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* neadache, peripheral neuritis, mental depression, convulsions, taxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous eactions* (drug fever, chills, toxic nephrosis with oliguria and nuria, periarteritis nodosa and L.E. phenomenon). Due to certain hemical similarities with some goitrogens, diuretics (acetazolanide, thiazides) and oral hypoglycemic agents, sulfonamides have aused rare instances of goiter production, diuresis and hypoglyemia as well as thyroid malignancies in rats following long-term dministration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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1. Braverman, L. E., Ingbar, S. H., and Sterling, K.: Conversion of Thyroxine (T_4) to Triiodothyronine (T_3) in Athyreotic Human Subjects, J. Clin. Invest. *49*:855-64, 1970.
2. Surks, M. I., Schadlow, A. R., and Oppenheimer, J. H.: A New Radioimmunoassay for Plasma L-Triiodothyronine: Measurements in Thyroid Disease and in Patients Maintained on Hormonal Replacement. J. Clin. Invest. *51*:3104-13, 1972.

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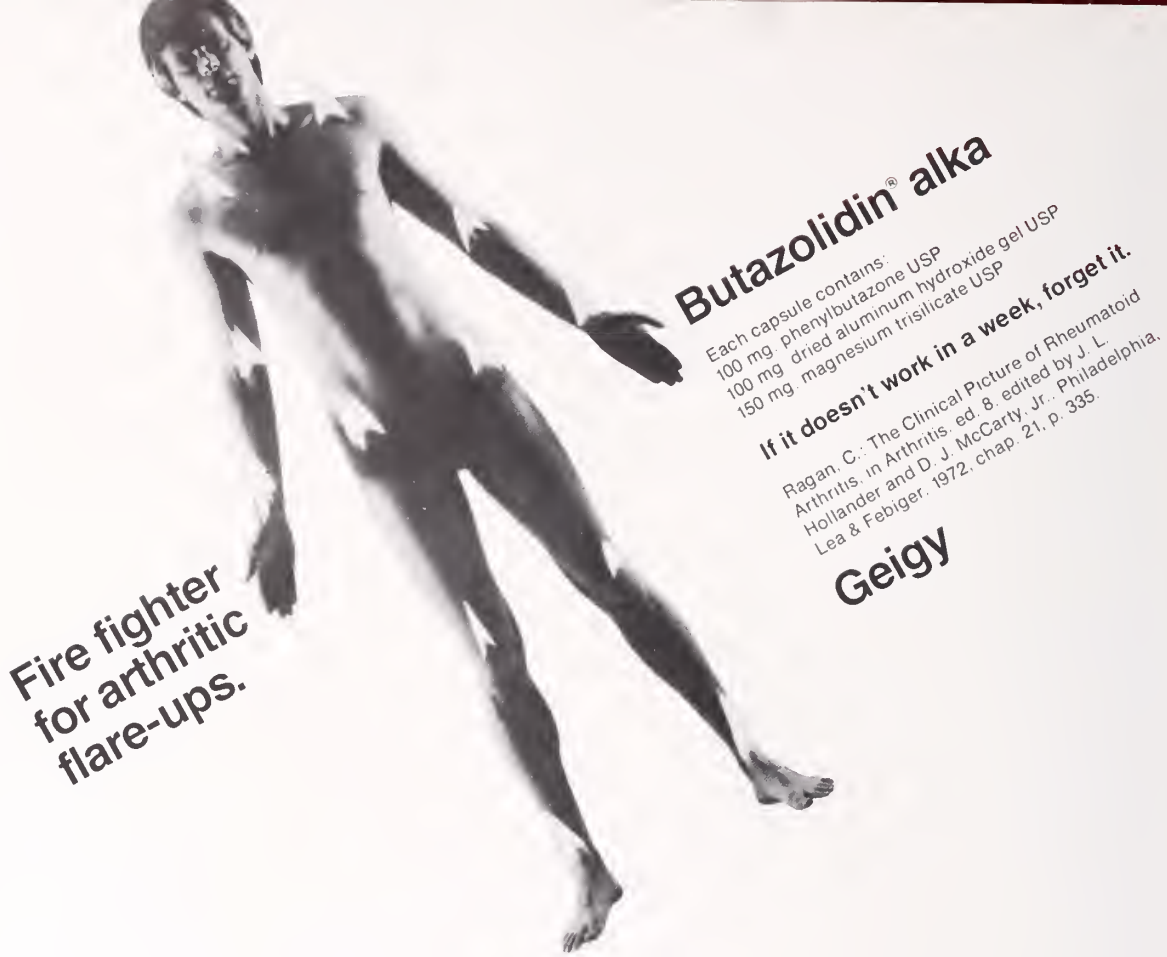

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Precautions The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

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Bacterial Endocarditis

Jack L. Le Frock, M. D.; and Albert S. Klainer, M. D.

Endocarditis, infection of the endocardial surface of a valve, the ventricular wall, or septum, is an infrequent disease entity whose recognition is of major importance because the proper diagnosis and treatment have greatly improved the morbidity and the mortality characteristics of the preantibiotic era. Diagnosis on clinical grounds is difficult: it may not be considered; the presenting manifestations include many syndromes other than the ones thought of as "typical" for endocarditis; and the presence of the infection may be indicated by none of the special features but rather by certain combinations of often minor ones.

In this discussion we shall describe the basic features of the infection that define the origin of the different clinical syndromes.

Cause

The valvular disease is a consequence of the bacteremia and many of the subsequent signs and symptoms are a combination of those arising from the systemic infection and those related to the damage produced on the afflicted valve.

Many organisms can cause endocarditis ranging from viruses upward in size, but most are due to bacteria.

Infections caused by such invasive species as *Staphylococcus aureus, Diplococcus pneumoniae, Haemophilus influenzae,* Group A hemolytic streptococci, meningococci, or gonococci invade both normal and damaged heart valves to produce acute bacterial endocarditis. Progressing rapidly, acute bacterial endocarditis is usually a fulminant infection and often is fatal. It produces ulceration and destruction of the involved valve leaflets which are prone to rupture.

Subacute bacterial endocarditis is due to infection, with less invasive bacteria occurring in the oral cavity, especially in gingival crevices or in apical abscesses; these are mainly steptococci including many nontypable strains, *Streptococcus viridans,* microaerophilic and anaerobic streptococci, but also other species such as *Staphylococcus epidermidis* and diphtheroids. Infrequently, subacute bacterial endocarditis is a consequence of cardiac surgery or of overwhelmingly sustained bacteremia superimposed on valvular heart disease. Thus, abdominal sepsis complicating the peritoneal cavity abscess or genitourinary infection can lead to heart valve infection with such organisms as *E. coli, P. mirabilis,* klebsiella, and pseudomonas. Subacute bacterial endocarditis can also occur secondary to upper respiratory tract infection, dental manipulations, surgical procedures, urinary tract infection, instrumentation, parturition, abortion, trauma, etc. The disease produced is usually slow in evolution and comprised of many different manifestations due to the fact that it is a combination of both slowly progressive destruction and early healing progressing in concert in the same lesion with the former process greater than the latter.

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Pathophysiology of Subacute Bacterial Endocarditis

Five factors are involved in the development of subacute bacterial endocarditis. They are as follows:

(1) A previously damaged valve (not always manifested by a detectable murmur).

(2) The specific hemodynamics that favor deposit of fibrin clots. In essence, it is the combination of high velocity flow through a small conduit (as in the regurgitant flow through a mitral valve or a ventricular septal defect) into a low pressure sink (as into the left atrium or right ventricle).

(3) The development of a sterile platelet fibrin thrombus. Fibrin slowly but gradually deposits on the surface of the leaflet with the formation of a sterile platelet fibrin thrombus over a variable period of time.

(4) The presence of antibody serves to agglutinate bacteria within fibrin clots without killing them. The fact that the organisms involved are usually indigenous and that bacteremia preeedes endocardial localization assures antibody development.

(5) Bacteremia that establishes infection of the endocardial surface; this is usually asymptomatic. Whether it follows a tooth extraction, for example, is deduced by the history of such manipulation in many with the infection, but it is of importance to recognize that not a single episode of bacteremia is involved, but rather many.

Pathophysiology of Acute Bacterial Endocarditis

The processes involved in the pathogenesis of subacute infective endocarditis are, with the exception of bacteremia, not involved in the severe form of the disease. Thus, acute bacterial endocarditis occurs very often in persons with previously normal hearts; however, it may be superimposed on abnormal valves as well. Since prior valvular damage is not required for the appearance of this kind of infection, it is obvious that a sterile platelet thrombus and jet flow are not required for its development (Table 1).

The bacteria that most frequently cause acute endocarditis are usually highly invasive; therefore, even very small numbers can invade the endocardium to establish infection. In addition, they are often species which most people have never encountered before or are relatively poor antigens so that antibody is absent or present only in very small quantities. Antibody against the invading organisms is, therefore, usually not detectable before, or involved in, the establishment of acute valvular infections.

Underlying Heart Disease

In general, the background for acute endocarditis has remained essentially unchanged: from 40 to 60 per cent of patients have no known previous cardiac disorders. Although rheumatic and congenital heart disease are still the commonest underlying disorders on which subacute infective endocarditis is superimposed, their frequency has decreased. Kerr suggested that, as the population aged, arteriosclerotic heart disease would probably become a significant antecedent lesion predisposing to the development of bacterial endocarditis, and this is so (Table 2). Arteriosclerotic valvular disease has become a fairly frequent lesion on which the subacute type of infection is implanted. The introduction of various types of surgery of the heart has added a group of iatrogenic lesions which may serve as foci for the development of both acute and subacute valvular infections. There also has been an increase of endocarditis

TABLE 1

Pathogenesis of Endocarditis

	SBE	ABE
Damaged Valve	+	+,o
Sterile Thrombus	+	+,o
High antibody level	+	o
Bacteremia	+	+
Primary focus of infection	none, teeth GU tract	none, wound, skin
Microorganisms	alpha or gamma Streptococci, S. epidermidis	*S. aureus* *D. pneumoniae* *N. gonorrhoeae* *N. meningitidis* *H. influenzae* *Strep. pyogenes* enterococci*

*May act like both

TABLE 2

Underlying Heart Disease

I. Rheumatic Heart Disease

II. Arteriosclerotic Heart Disease
- a. Calcification of mitral annulus
- b. Infarcted myocardium
- c. Damaged chordae tendinae

III. Congenital Heart Disease
- a. Ventricular systal defect
- b. Tetrology of Fallot
- c. Patent ductus arteriosus
- d. Marfan's syndrome

IV. Heart Surgery

appearing in patients with acute myocardial infarction: the infection may be subacute or acute, depending on the nature of the organism involved, and may involve either the right or left side of the heart.

Clinical Features

1. *Fever*: Fever is by far the most common sign in infective endocarditis. Under certain circumstances the febrile response may be minimal or absent for variable periods. Fever may be absent in patients with endocarditis who also have severe heart failure, uremia, a ruptured mycotic aneurysm, or have received antimicrobial therapy. The increasing incidence of endocarditis in older persons may account for the greater frequency with which fever is absent. Repeated short courses of antibiotic therapy in patients with undiagnosed endocarditis produces a characteristic clinical pattern of repetitive episodes of remission and relapse of fever; even small quantities may mask the fever as well as other manifestations of endocarditis.

2. *Cardiac Murmurs*: A cardiac murmur was the sine qua non for the diagnosis of infective endocarditis, and the change in its quality and intensity was common in the acute but not the subacute type of infection. It is now accepted, however, that as many as 15 per cent of patients may have no detectable murmurs when they present with endocarditis. Murmurs can first appear during therapy, some time after therapy has been completed, or fail to develop at any time.

3. *Cutaneous Manifestation*: *Petechiae* are the most common cutaneous manifestation of endocarditis. They are seen in 20-40 per cent of patients. In the preantibiotic era, they were seen in 85 per cent. *Subungual hemorrhages* are presently uncommon in patients with bacterial endocarditis. *Osler's nodes* are seen in only 10 per cent of cases of subacute bacterial endocarditis and are rare in acute endocarditis.

4. *Splenomegaly*: The incidence of splenomegaly has decreased and is now seen in 20-55 per cent of patients.

5. *Retinal Lesions*: "Roth spots" are located in the retina and have the appearance of cotton wool exudates. These lesions, oval or "boat-shaped" hemorrhages with a central white area, are uncommon.

6. *Neuropsychiatric Manifestations*: Neuropsychiatric complications are common in bacterial endocarditis; and, if sought, may be found in up to 50 per cent of patients. Any acute neurologic syndrome or psychiatric illness arising in a patient with fever and a cardiac murmur in the absence of arrhythmia should suggest bacterial endocarditis. Complications are mainly due to infected emboli; meningoencephalitis is the most common complication, but overt embolus and mycotic aneurysms are not rare. Brain abscesses are a more common complication in acute than in subacute bacterial endocarditis. With SBE, the neurologic and psychiatric symptomatology often is prominent and may so color the picture that the etiology may escape the physician for weeks. With acute bacterial endocarditis there also is a wide range of neuropsychiatric complications, but the events are compressed and linked together by the picture of sepsis.

TABLE 3

Neuropsychiatric Syndromes Occurring in Bacterial Endocarditis

1. Psychiatric:
   Neurosis, psychosis, altered personality, behavior problems, altered state of consciousness
2. Toxic Encephalopathy:
   Headache, lethargy insomnia, irritability
3. Infection:
   Meningoencephalitis, abscess
4. Cerebrovascular disease:
   - Ischemia
     - Transient ischemic attack
     - Infarction
   - Hemorrhage
     - Intracerebral
     - Subarachnoid

Listed in Table 3 are the neuropsychiatric symptoms and syndromes occurring in bacterial endocarditis.

The treatment of the cerebral complications does not, in general, require any departure from the usual treatment of endocarditis, but neurosurgical intervention may be required for mycotic aneurysms and cerebral abscesses.

7. *Renal Manifestations*: Three types of lesions can involve the kidney during the course of bacterial endocarditis: (1) focal "embolic" glomerulitis; (2) acute glomerulonephritis; and (3) chronic glomerulonephritis. They are seen more frequently in subacute bacterial endocarditis than in acute bacterial endocarditis. Gutman recently showed that acute glomerulonephritis developing as a complication of endocarditis is a form of immune complex disease. Glomerulonephritis complicating endocarditis is partially reversible with effective antimicrobial therapy.

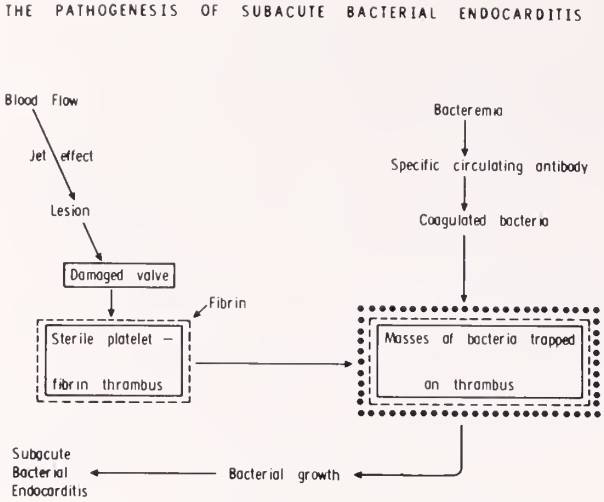


Figure 1.

Renal insufficience secondary to endocarditis is seen in about 10 per cent of cases. Hematuria is very common, occurring in 25 to 90 per cent of patients. Uremia can develop and is generally accompanied by absence of hypertension, little or no fever, and a high incidence of sterile blood cultures.

Laboratory Findings

Elevation of the sedimentation rate is the most common abnormal laboratory finding in patients with bacterial endocarditis. Although the leukocyte count may be elevated and there may be a "shift to the left," these are frequently absent. Abnormalities of serum proteins, namely hyperglobulinemia, with inversion of the albumin/globulin ratio is also common and is accompanied by an increase in numbers of plasma cells in the bone marrow. Anemia is common, occurring in 50-80 per cent of cases. The degree of anemia is generally related to the duration of infection, although in more acute cases it may develop rapidly. It is usually normocytic and normochromic in character. The serum iron level is reduced and the total iron binding capacity is elevated.

Blood obtained from the earlobe of patients with bacterial endocarditis contains an increased number of all types of white cells and a predominance of histocytes. These findings may be detected in normal persons to a lesser degree, and are thought to reflect the greater filtering capacity of the ear over that of the fingers. Careful and frequent urinalysis early in the disease may show red cells, red cell casts, white cells, and albuminuria.

Rheumatoid factor is present in the serum of 50 per cent of patients with SBE and decreases or entirely disappears after successful treatment. Recent studies of subacute bacterial endocarditis have indicated that most patients develop higher titers of agglutinating, complement fixing, and opsonizing antibodies specific for the invading organisms.

Diagnosis

The following factors are helpful in diagnosis:

(1) Classical signs and symptoms of fever, murmur, anemia, petechiae with an illness of six weeks to three months are easily recognized. Clubbing, hematuria, and history of dental disease and/or manipulation are helpful.

(2) Atypical presenting features are listed in Table 4 and some of them are discussed below:

(a) *Prolonged unexplained fever* especially accompanied by high sedimentation rate, anemia and hyperglobulinemia. Especially important is the response of "fever" to short course antibiotic trials when treatment is used empirically.

(b) *Arrythmias and congestive heart failure*: The incidence of atrial fibrillation or cardiac failure or both, previously rare in the early stage of subacute endocarditis, is now relatively common. This is probably related to the empiric administration of short courses of antimicrobial therapy in the absence of a diagnosis. Such ineffective treatment may go on for weeks or months and lead to progressive cardiac damage with the establishment of congestive heart failure and/or arrhythmias.

(c) *Pulmonary infarction* as a direct result of bacterial endocarditis is almost limited to cases involving the right side of the heart. In fact, the lung is the commonest site for deposi-

TABLE 4

Atypical Presenting Clinical Features in Endocarditis

1. Unexplained fever
2. Arrythmias and congestive heart failure
3. Pulmonary infarction
4. Mental confusion
5. Sterile meningitis
6. Unexplained uremia
7. Hemiplegia
8. Subarachnoid hemorrhage
9. Acute abdomen
10. Night sweats
11. Joint or back pain

tion of emboli in this form of bacterial endocarditis.

(d) *Mental confusion*: Psychiatric changes ranging from minor aberrations in personality and behavior to major psychiatric breakdowns necessitating the patient's admission to a psychiatric ward. Psychiatric complications are more common in older patients; and those presenting with mental aberrations have a poorer prognosis. In some cases, abnormalities in the cerebrospinal fluid may suggest an underlying cause, but many patients who present with psychiatric features have no localizing cerebral signs and no significant cerebrospinal fluid changes. The presence of fever and a cardiac murmur should be given respectful attention in such instances.

(e) *Sterile meningitis*: An episode of sterile meningitis is not uncommon as the initial manifestation of SBE. Because viral or partially treated bacterial infection of the meninges is the common cause of this syndrome, the association with endocarditis is often not considered. The following case illustrates this problem.

A 41-year-old pharmacist developed a flu-like syndrome and took 1 gm. of tetracycline for five days. He felt better, but several days later he developed a severe headache, lethargy, and some neck stiffness. He was admitted to a local hospital, where his spinal fluid was found to contain 650 cells per cubic millimeter (80 per cent neutrophils) and 60 mg. of protein per 100 ml.; culture for bacteria was sterile. Parenteral chloramphenicol was given and cerebrospinal fluid became normal. One week after returning home he began to experience lethargy and evening temperatures spiking to 100.8°F. He was readmitted to the hospital for two days, where his physical and laboratory examinations were normal. Blood cultures were not done. After he left the hospital, similar symptoms occurred and disappeared each time after he treated himself with tetracycline. After eight weeks of repeated admissions and relapses, he was readmitted to the hospital where all physical and laboratory studies were negative except that six blood cultures yielded microaerophilic streptococci. The patient was treated with parenteral antimicrobials for one month, and he totally recovered.

(f) *Unexplained uremia*: Renal failure may be a major factor in the failure to establish a diagnosis of endocarditis for several reasons: blood cultures are often sterile, and the kidney dysfunction is so concerning to the physician that it masks the cardiac disease. A good example is illustrated in the following case:

A 21-year-old male with a corrected tetralogy of Fallot when admitted to the hospital had petechiae but no fever, splenomegaly or clubbing. The BUN was 440 mg. per 100 ml. and the serum creatinine 15.7 mg. per 100 ml. All blood cultures were negative. Autopsy revealed endocarditis of the tricuspid valve and the pulmonary endothelium opposite the aortic opening of the operative site; gram-positive cocci were found in the vegetations. The kidneys showed diffuse subacute glomerulonephritis. A similar case was reported by Doctor Weinstein in his classic article of "Infective Endocarditis in the Antibiotic Era" in *The New England Journal of Medicine*.

(3) Blood cultures are the most important laboratory aid and the critical information necessary to establish an etiologic diagnosis of endocarditis is obtained from them. Meticulous care must be used in obtaining blood cultures since contamination of the sample may result in considerable confusion and possibly inappropriate therapy. The ratio of blood to culture medium should be about 1:10.

The authors' experience, as well as others, has indicated that the best time to draw blood for culture is about two hours before the temperature begins to rise but this is not always feasible. Monitoring the temperature at 30 to 45 minute intervals, beginning at the time an increase is expected may be helpful. Frequently, the rise in temperature can be predicted on the basis of the previous 24 hours. Blood is cultured as soon as it is evident that fever is developing; six separate cultures are obtained at 10 to 30 minute intervals. A single positive culture, however, must be interpreted with great caution because of the possibility of contamination. This is true even when the organisms are those usually not considered contaminants. Two positive blood cultures are necessary to confirm that the bacteremia is continuous rather than transient. One would not want to commit a patient to four to six weeks of hospitalization on the basis of one positive blood culture. For this reason, it is our policy to obtain at least two, and preferably three, "positive" blood cultures to establish the diagnosis of infective endocarditis.

All blood cultures should be incubated at 37°C; room temperature may be required for some yeasts and fungi. The cultures should be incubated for at least two to three weeks and as long as four weeks if Brucella is suspected.

If the patient has been treated with penicillin G, penicillinase should be added to the blood culture bottles. Addition of para-aminobenzoic acid will neutralize sulfonamides, and metallic salts or cystine will neutralize the tetracyclines.

TABLE 5

Regimens for Treatment of Bacterial Endocarditis

Organism	Sensitivity	Antibiotic	Dose per day	Duration (weeks)
Streptococcus viridans	Penicillin G-sensitive <0.2 u/ml.	Penicillin G IM; IV	6-12 million units	4
	Penicillin G-sensitive >0.2 u/ml.		12-20 million units	
B hemolytic streptococcus Pneumococci Gonococci		Penicillin G IM; IV	12-20 million units	4
Staphylococcus aureus Staph epidermidis	Penicillin G-sensitive <0.4 u/ml.	Penicillin G IM; IV Oxacillin IV Keflin Clindamycin	12-24 million units 6 grams 12 grams 900 mg. tid.	6
	Penicillin G-sensitive >0.4 u/ml.			
Streptococcus faecalis		Penicillin G or Ampicillin IV + Streptomycin IM Erythromycin Vancomycin	20-40 million units 12-20 grams 1-2 grams 4 grams 3 grams	6
Haemophilus influenzae		Ampicillin IV	8-12 grams	6

Recent studies have shown that blood cultures are negative in about 20 per cent of patients with subacute infective endocarditis. Among the factors that may be responsible for negative blood cultures are: (1) the use of antibiotics in etiologically undefined febrile illnesses, (2) inappropriate cultural techniques, (3) the presence in the blood of factors that inhibit microbial growth, (4) right-sided endocarditis, (5) the presence of renal disease, and (6) the prolonged duration of subacute bacterial endocarditis ("bacterial-free state").

Therapy

The specific choice of antibiotics for the management of endocarditis is often based upon personal experience. The only requirement, whatever the agent employed, is that the organism be highly sensitive to it. In general, bactericidal compounds appear to be more effective than bacteriostatic ones. There is insufficient data at present to indicate optimal doses, duration of therapy, and route of administration of any of the antibiotics used to treat endocarditis.

The authors feel that all patients should be treated for a minimum of four weeks with parenteral antibiotics. We have found the regimens listed in Table 5 successful.

Unusual Microorganisms: The choice of antibiotics for therapy of endocarditis due to such species as Mimeae, Escherichia, Enterobacter, Klebsiella, Alcaligenes, Pseudomonas, Hafnia, anaerobic diphtheroids, and *S. epidermidis* is based on the *in vitro* sensitivity of the organism recovered from the blood. The drug chosen should be preferably bactericidal and given in the maximal tolerated dose.

Fungi: Amphotericin is presently the most effective drug for the management of endocarditis caused by fungi and yeast. There are several dosage schedules which have been used.

(a) 1.5 mg./kg. every other day for the entire course of treatment.

(b) 0.25 mg./kg. the first day, 0.5 mg./kg. the second, 0.75 mg./kg. the third and 1 mg./kg. the fourth and subsequent days until therapy is completed.

(c) Drutz suggested the administration of quantities of the drug necessary to produce and maintain blood levels two to four times greater than *in vitro* inhibitory concentration.

Surgical Therapy

Surgery has been recently added to the therapy of infective endocarditis. This new dimension may be life-saving in cases in which chemotherapy fails to produce total cure, or potentially lethal complications develop in the area of the infected valves. The authors feel the following are indications for surgery in endocarditis:

(1) Infections that fail to respond after treatment with large doses of a highly active antibiotic.

(2) Relapse of infection following two or more courses of therapy with an effective antibiotic.

(3) A single relapse of fungal endocarditis.

(4) Development of aneurysms of the sinus of valsalva or the atrioventricular junctional tissues.

(5) Intractable or rapidly progressing heart failure despite specific medical therapy.

(6) The presence of an infected prosthetic valve or patch. If initial treatment is followed by cure, removal of the prosthesis is not necessary; however, if relapse occurs after completing of one course of therapy, replacement of the intracardiac foreign body is usually indicated.

(7) Recurrent systemic or pulmonary emboli.

When surgery is indicated, the presence of active infection is not a contraindication. It probably is a mistake to wait until the infectious process seems to be under control because, by delaying, tissue destruction may proceed to a point when surgery becomes technically difficult or impossible. In this situation, antimicrobial therapy must be maintained throughout the pre-and post-operative periods.

Chemoprophylaxis

Because of the phenomenon of transient bacteremia and the risk of endocarditis, patients with rheumatic, congenital, arteriosclerotic or syphilitic heart disease undergoing major dental procedures, surgical manipulation of the urinary or intestinal tract, gynaecological procedures and tonsilloadenoidectomy should receive chemoprophylaxis. The American Heart Association has suggested several programs for this. The authors prefer to administer one-million units of penicillin G intramuscularly or intravenously one hour before and one hour after surgery and then three to four additional doses, at six-hour intervals. Probably two doses are sufficient for dental extraction and tonsilloadenoidectomy. We would like to emphasize that while this kind of chemoprophylaxis appears to be effective in many instances, it may not completely prevent the development of endocarditis.

A list of references and articles for suggested reading may be obtained by writing The Journal.

Kidney Donors

Donors of kidneys can generally expect to lead a healthy, productive life with little if any change in their life-styles, according to a study published in the December issue of *Surgery, Gynecology, & Obstetrics*, the official scientific journal of the American College of Surgeons.

Two Harvard University surgeons reported that there was only one transplant-related death among 300 kidney donors studied over a 19-year period at Peter Bent Brigham Hospital, in Boston. Major post-operative complications occurred in only 4.3 per cent. Twenty-four per cent suffered minor problems.

Throughout the world there have been five other deaths of donors over the past 20 years.

The authors, Alan Hugh Bennett, M.D., and J. Hartwell Harrison, M.D., said that the main lifelong risk after post-operative recovery is traumatic injury to the remaining kidney. Donors are advised to avoid body contact athletics.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Assistant Professor of Medicine

Burkitt's Lymphoma

Everett B. Wray, M.D., Medical Resident, West Virginia University Hospital.

Case Presentation

A 16-year-old male Caucasian was admitted to the West Virginia University Medical Center for evaluation of cervical adenopathy. He was in good health until December 1973, when he developed a sore throat with bilateral cervical adenopathy. The enlarged nodes on the right side regressed, but the nodes on the left persisted. These nodes continued to increase in size despite therapy with antimicrobial agents, and he underwent needle aspiration of the involved nodes. Gram stain of this aspirate was negative, and the biopsy was read as reactive hyperplasia. He was treated with penicillin.

The nodes continued to enlarge, however, and he subsequently underwent open biopsy which "revealed abscess formation in the largest node with a large amount of purulent drainage." In retrospect, this may have been necrotic tumor. This biopsy was read as "sinus histiocytosis."

He was referred to the WVU Hospital for further evaluation. Questioning here revealed a recent history of persistent fever with occasional chills and night sweats. He had progressive anorexia with a weight loss of 21 pounds. Also, he had noted marked muscular weakness and lethargy with a subsequent decrease in his exercise tolerance. His past medical history and review of systems were unremarkable. He had a strong family history of exogenous obesity and three uncles died with unknown types of cancer. He was born and raised in Charleston, West Virginia and had never been outside the State.

Physical examination revealed an obese, 16-year-old male with obvious massive enlargement of his left cervical lymph nodes. Blood pressure was 135/80, pulse 140, and temperature 39.6°C. Examination of his throat revealed 1+ tonsillar hypertrophy. There was massive cervical adenopathy on the left with one large, 10 x 12 cm., firm, non-tender mass present in the anterior cervical triangle (Figures 1 and 2). Multiple smaller, but obviously enlarged, lymph node masses were present in both posterior cervical triangles. Abdominal exam was negative for masses, tenderness, or organomegaly. His external genitalia were small with bilateral hypoplastic testes. He was noted to have patches of hyperpigmentation involving the axilla, knuckles, groin and scrotum which may have been acanthosis nigricans.

Laboratory data showed a normochromic, normocytic anemia with a hemoglobin of 9.3 and an hematocrit of 30.2. His white blood count was elevated to 15,300 with a leukoerythroblastotic picture. Differential count was 33 bands, 23 segmented cells, 17 lymphocytes, 6 monocytes, 1 eosinophil, 1 basophil, 8 metamyelocytes, and 11 myelocytes; one nucleated RBC was seen. The platelet count was decreased to 99,000. Serum chemistries showed a decrease in the albumin to 2.8 gm. per cent, slight elevation of the total bilirubin to 1.1 mg. per cent, and elevations of the uric acid to 12.0 mg. per cent, LDH to 3000 mU./ml., and SGOT to 84 mU./ml. Routine urinalysis was negative except for a large amount of acetone. Prothrombin time, activated partial thromboplastin time, haptoglobin, and plasma hemoglobin were within normal limits. The ESR was increased to 120 mm./hr. Blood cultures revealed no growth. Chest x-ray was normal without evidence of hilar adenopathy. Skull and mandible films were obtained which showed a relatively small sella turcica and no evidence of involvement of the bony structures by tumor.

Figure 1. A frontal view of the patient showing the large tumor mass overlying, but not invading, the left mandible. (Figure 2). Lateral view showing the post-auricular extension of the mass.

During his hospitalization here, the outside pathology slides were reviewed, and they were consistent with a diagnosis of Burkitt's lymphoma (Figures 3 and 4). A bone marrow aspirate was performed which showed the marrow to be replaced by monotonous small, mononuclear cells compatible with Burkitt's lymphoma (Figure 5). He had Stage IV B disease on the basis of marrow involvement and the symptoms of weight loss, fever and sweats.

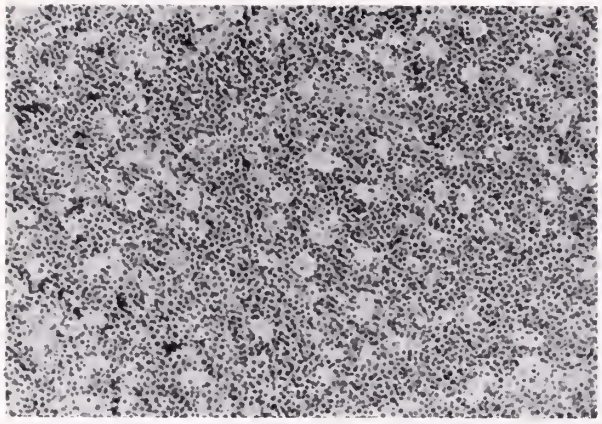
Arrangements were made for his transfer to the National Cancer Institute in Bethesda, Maryland for inclusion in its Burkitt's lymphoma treatment protocol. He was treated there with cyclophosphamide, vincristine and methotrexate and was given prophylactic intrathecal methotrexate. Dr. John Ziegler, Chief of Pediatric Oncology at the National Cancer Institute, reported to us recently that the patient is in complete remission with no discernable tumor and a normal marrow.

The lack of pubertal development was puzzling. He was at first thought to have Klinefelter's syndrome, but buccal smear studies showed no XXY pattern. Studies at the National Cancer Institute showed very low serum gonadotropin levels, and he was thus felt to have hypogonadotrophic hypogonadism.

Sheila Shah, M.D., Assistant Professor, Department of Pathology, West Virginia University Medical Center.

Microscopically, there is complete effacement of normal architecture of the lymph node and replacement with a monomorphic infiltrate of primitive cells. The most striking feature under low power (Figure 3) is the "starry-sky" pattern caused by a scattering of non-neoplastic histiocytes. Under high power (Figure 4), these histiocytes contained phagocytosed nuclear debris among the undifferentiated malignant cells. This "starry-sky" pattern is, however, not specific for Burkitt's lymphoma. It may be seen in acute lymphoblastic leukemia, acute myeloblastic leukemia, and in some malignant lymphomas of the histiocytic or poorly-differentiated lymphocytic types.

The peripheral smear showed immature myeloid cells, nucleated red blood cells, and an occasional atypical mononuclear cell. Bone marrow aspirate (Figure 5) shows marrow replacement with monotonous undifferentiated primitive cells that show large nuclei and scant cytoplasm with vacuolation. Methyl green-pyronine stains showed cytoplasmic positivity, while PAS staining showed only occasional positivity, thus differentiating these cells from lymphoblasts.



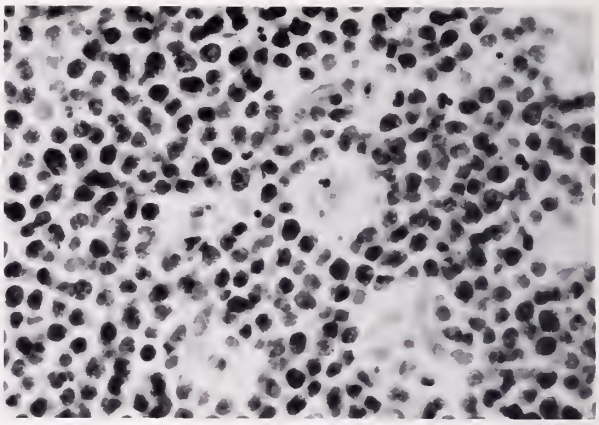


Figure 3. Low power (100 X) view of the lymph node biopsy showing the classic "starry-sky" appearance of histiocytes scattered within tumor cells. (Figure 4). High power (440 X) view of the lymph node showing the non-malignant histiocytes.

The morphology and staining characteristics are diagnostic of Burkitt's lymphoma.

Doctor Wray:

Discussion

In 1958, Denis Burkitt first described what he termed a malignant sarcoma involving the jaw in African children. This tumor was by far the most common one seen in children in Uganda. Since then, reports of this tumor have appeared from many countries including Brazil, Columbia, New Guinea, India, England, Canada, Sweden, Japan, Thailand, and the United States.

The etiology of the tumor remains obscure, though there is some evidence of a possible viral etiology. This possibility is primarily based on serologic and epidemiologic studies done on the Ebstein-Barr virus (EBV). It has been shown that antibodies to EBV are present in higher concentrations in African patients with Burkitt's lymphoma than in control groups. Also EB virus DNA was present in high concentrations when the cellular DNA from fresh specimens of tumor from African patients was analyzed. When American patients, however, with Burkitt's lymphoma were analyzed for antibody to EBV and for EB virus DNA in tumor tissue, there was no significant difference between the tumor and the control groups. This suggests that, at least in American patients, the EB virus is an insufficient etiologic factor and may be simply a "passenger phenomenon;" however, we do not have final answers on this subject as yet.

There is additionally some recent epidemiologic evidence linking Burkitt's lymphoma with malaria as both diseases occur in the same region of Africa. Patients with Burkitt's lymphoma frequently have features of chronic malaria, and reduction and protection against malaria have resulted in a reduced incidence of the tumor. Two explanations have been proposed for these findings: (1) malaria may "prime" the reticuloendothelial system for the oncogenic event; or (2) acute malaria may result in immunosuppression and render the host more susceptible to an oncogenic virus.

Burkitt's lymphoma is primarily a disease of childhood with the mean age of onset between seven and ten years of age. The patients have a rapid onset of symptoms with the mean time of onset to diagnosis of three months. Without appropriate therapy, the disease is quickly fatal with most patients dying within one year of onset.

In one series of 137 patients from Uganda, the presenting complaint was analyzed. Sixty per cent of the patients presented with a facial or jaw tumor while 25 per cent presented with an abdominal tumor and 15 per cent with spinal cord compression and paraplegia.

In a series of 21 American patients from the National Cancer Institute (NCI), however, the presenting symptoms were jaw tumor in four patients, abdominal pain in fourteen patients, and cervical adenopathy in three patients. In the 17 patients without jaw tumors as presenting symptoms, an additional four were noted to have involvement of the mandible or maxilla by X-ray. Of the abdominal masses noted on presentation, the most common site was the ovary; in fact, seven of nine females had ovarian involvement and in six this was bilateral. Lymphadenopathy, though not the presenting symptom, was noted in 13 patients and this was confirmed in six by lymph node biopsy. This is in distinct contrast to the original series of 38 cases presented by Burkitt in which none of the patients had lymph node or splenic involvement. In another retrospective survey done at the NCI, it was noted that of 20 patients with pathologic

criteria for Burkitt's lymphoma, only one presented with a jaw tumor while 16 presented with signs or symptoms referrable to the abdomen.

These data suggest that the clinical presentation differs in the African and American patients; i.e. jaw involvement is more common in Africans while visceral involvement, especially the abdominal cavity, is more common in Americans. Additional areas of involvement include the bone marrow, gastrointestinal tract, liver, kidney, thyroid, long bones, testis, skin and the central nervous system.

The staging of this disease is difficult due to the propensity for the tumor to involve extranodal sites. It has been noted that the more localized the disease the better the survival, so staging is warranted to assess the effectiveness of therapy. Ziegler at the NCI has proposed a staging scheme as noted in Table 1. This staging scheme takes into account the poor prognosis associated with large unresectable abdominal tumors or abdominal tumors plus multiple extra-nodal sites. This staging probably reflects the prognostic influence of tumor volume rather than the actual site of involvement.

The drug of choice for treatment is cyclophosphamide (Cytoxan). Surgical treatment or radiation therapy to remove or shrink the bulk of the tumor is also indicated. Using Cytoxan 40 mg./kg. IV in a single dose, 137 patients in one series were evaluated for response. Eighteen patients died in the first week of therapy. The majority of these deaths were sudden and probably secondary to electrolyte imbalances, including hyperkalemia, hypocalcemia, and hyperphosphatemia. These metabolic abnormalities probably occurred as a result of rapid lysis of a large tumor volume in response to the effective therapy.

Of the remaining 119 patients, 110 (92 per cent) underwent complete remission while the other 8 per cent died of drug-resistant tumor. Of those with complete remission, approximately two-thirds relapsed. One-half of the patients who relapse will do so by ten weeks and early relapsers have a poor prognosis. A two-year survival is consistent with a "cure" since relapse very seldom occurs after this interval of disease-free time.

TABLE 1

Staging System

I. Localized facial tumor mass

II. Two or more facial tumor masses

III. Intrathoracic, intra-abdominal, or osseous tumor

IV. Meningeal or generalized bone marrow involvement

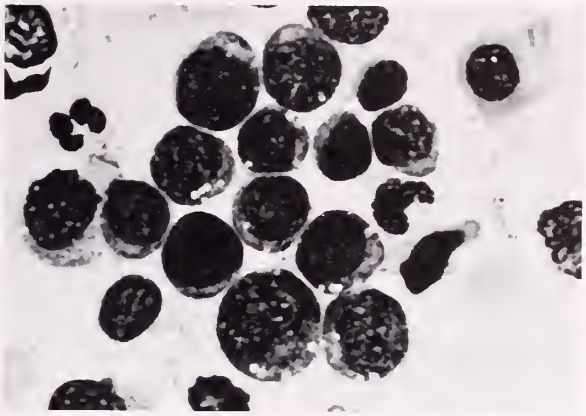


Figure 5. Cells from the bone marrow (1000 X). Note the preponderance of immature lymphoid cells.

Relapse is frequently manifested by central nervous system involvement and this is best managed with intrathecal cytosine arabinoside or methotrexate. Intrathecal drugs are now prophylactically being administered to prevent this CNS relapse as part of the total "cure" concept in treating this disease. There appears to be no reason to use maintenance therapy with cyclophosphamide as long as close follow-up is maintained and early therapy is instituted at the first sign of relapse. Immunotherapy with BCG is being tried experimentally as a maintenance agent.

Raymond B. Weiss, M.D., Chairman, Division of Medical Oncology.

I would like to make several comments. One is the diagnostic value of recognition of leukoerythroblastosis. The presence of immature white cells of the myeloid series and nucleated red blood cells in the peripheral blood can be indicative of invasion of the marrow by foreign cells, although benign non-hematologic disease can sometimes cause this abnormality. In a patient with known malignancy, it is almost certainly indicative of malignant cells in the marrow as it was in this patient. Most patients with various hematologic and non-hematologic malignancies with marrow involvement, however, do not have leukoerythroblastosis. If it is present, it makes one strongly suspect marrow invasion, but the only way to find marrow involvement in most malignancies is to look for it and this means by bone marrow biopsies. Marrow aspiration alone is inadequate for detecting marrow tumor, and we have seen literally dozens of cases at this hospital in the last two years which confirm this statement.

Although this disease is rare in the United

States, it is common enough for this hospital to have had two cases in the last year. Some cases may be misdiagnosed as some other malignant entity, usually lymphosarcoma. A retrospective review of pathologic material from young patients diagnosed as lymphosarcoma or reticulum cell sarcoma at the Armed Forces Institute of Pathology found 20 cases of Burkitt's lymphoma among 148 patients. One should not make the mistake of regarding this disease as being unimportant in American patients. It should be included in the differential diagnosis of any young person with a history and physical examination compatible with the diagnosis of lymphoma. As has been pointed out, a high percentage of patients with this disease respond to chemotherapy and many of these have long survivals; thus, recognition of the entity and proper therapeutic management are essential.

An interesting facet about this patient is that his EB virus antibody titer done at this hospital was reported as greater than 1:160 and the one done at the NCI was 1:320. As Doctor Wray stated most American patients do not have these high EB virus titers which are characteristic of the African patients.

Suggested Reading

1. NIH Clinical Staff Conference: Burkitt's Tumor. Ann. Int. Med. 70:817-832, 1969.
2. Herlitzka, A., Badruddoja, M. and Dube, V.: Clinical and Pathologic Features of Burkitt's Lymphoma. Surg. Gyn. Ob. 106:81-86, 1973.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

1974 Student Research Convocation West Virginia University School of Medicine

The Tenth Annual Student Research Convocation took place on April 26, 1974. The first prize, an engraved medallion and a $100 cash award, was established in 1965 to honor Dr. Edward J. Van Liere, Dean Emeritus, for his leadership in bringing the School of Medicine to full stature, his devoted interest to students and his many scientific achievements. The second and third prizes were $50 and $25, respectively. Publication of the abstracts in *The West Virginia Medical Journal* constitutes an important and much appreciated recognition of the students' efforts.

Roy L. Butcher, Ph. D., *Chairman*
Student Research Convocation Committee

Testosterone Effects on ATP Concentrations In the Guinea Pig Seminal Vesicle

David H. Johe, Medicine I

Coffey, et. al. (Mol. Pharmacol. 4:580, 1968) and Ritter (Mol. Pharmacol. 2:125, 1966) have observed that the ATP concentration in the ventral prostate of the two-week castrated rat remains unchanged from normal, but that one hour after treatment with testosterone (50 mg./kg. bw.) a marked reduction in ATP concentration occurred. Since the prostate is a complex tissue, it is impossible to separate muscle and epithelial components for experimentation. This separation can be done, however, in another sex accessory tissue: the guinea pig seminal vesicle (Am. J. Physiol. 182:507, 1955). The purpose of this study was to demonstrate the effects of castration and testosterone replacement on the ATP levels in the muscle and epithelium of the guinea pig seminal vesicle as well as the anterior prostate.

Significant differences in ATP concentrations of the muscular and epithelial components were observed in the seminal vesicle using the method of Stanley and Williams (Analyt. Biochem. 29:381, 1969). The muscle contained approximately twice the concentration of ATP found in epithelium. Five days after castration, ATP levels had decreased dramatically ($P<0.05$) in the epithelium (70 per cent) and muscle (37 per cent) of the seminal vesicle. The administration of testosterone in a single dose (50 mg./kg. bw. one hour before killing the castrated animals) produced an approximately twofold increase in ATP concentration of the epithelium, but showed little change in muscular concentrations.

There was little effect on the concentration of ATP in guinea pig anterior prostate following five days of castration. Replacement of testosterone caused a significant decrease ($P<0.05$) in ATP concentration.

The action of testosterone on the ATP concentration in the prostate appears to be the reverse of that observed in the seminal vesicle. Testosterone decreases the ATP in guinea pig anterior prostate and rat prostate (Mol. Pharmacol. 2:125, 1966 and 4:580, 1968) and elevates the ATP in the epithelium of the guinea pig seminal vesicle.

A Mathematical Model for Volume Regulation in the Human Erythrocyte

G. D. Marano, Medicine II

The human erythrocyte is in osmotic equilibrium with plasma in spite of an electrochemical gradient to move sodium (Na) into and potassium (K) out of the cells. The passive diffusion of these ions along their electrochemical gradients is counteracted by the active

transport of Na and K in the reverse directions. The maintenance of the steady state of K and Na establishes the erythrocyte's volume. Thus, volume control is a function of the active transport of Na and K across the red cell membrane. In order to analyze this volume control, a system of differential equations describing various transport processes was formulated. The equations include functions which describe the active transport and passive diffusion of Na and K, cellular electro-neutrality and osmotic shift of water. The four parameters of interest can be described mathematically as follows:

$$K: \quad \frac{d(V^i C^i_K)}{dt} = AK_K \left(C^o_K - \frac{C^i_{Cl} C^i_K}{C^o_{Cl}} \right) + AM'_K \left(\frac{C^o_K}{C^o_K + K^K_m} \right) \left(\frac{C^i_{Na}}{C^i_{Na} + K^{Na}_m} \right)$$

$$Na: \quad \frac{d(V^i C^i_{Na})}{dt} = AK_{Na} \left(C^o_{Na} - \frac{C^i_{Cl} C^i_{Na}}{C^o_{Cl}} \right) - AM'_{Na} \left(\frac{C^o_K}{C^i_K + K^K_m} \right) \left(\frac{C^i_{Na}}{C^i_{Na} + K^{Na}_m} \right)$$

$$Cl: \quad \frac{dC^i_{Cl}}{dt} = \left(\frac{dC^i_K}{dt} + \frac{dC^i_{Na}}{dt} \right) + z \frac{dC_{Hb}}{dt}$$

$$V^i: \quad \frac{dV^i}{dt} = ARTK_{H_2O} \left(C^i_K + C^i_{Na} + C^i_{Cl} + C_{Hb} - \left(C^o_K + C^o_{Na} + C^o_{Cl} \right) \right)$$

The equations were solved simultaneously by computer (IBM 360) to obtain a description of the transitory changes of the above four parameters with alterations in external environment e.g., hypertonic plasma, hypotonic plasma, hyperkalemia. A summary of some of the results are as follows: *Case* 1 — Plasma osmotic concentration increase by 8.0 per cent: Cell volume decreased within 10 seconds by 4.2 per cent. In one hour cell Na decrease and cell K increase began. From three to 24 hours cell volume increased. *Case* 2 — Increase plasma K concentration by 70 per cent: Cell volume began to increase at 100 seconds. From 100 seconds to 10 hours the cell Na decreased by 6 per cent and cell K increased by 1 per cent. At 10 hours cell Na increase and cell K decrease began. Within 24 hours cell volume increased by 1.42 per cent. It is clear from this mathematical model that if the steady state of Na or K is not maintained for whatever reason e.g., drug action or blood disease, the volume of the red cell will be altered.

An Evoked Potential Study of the Sensory Pathways in The Brainstem of the Opossum, Didelphis Virginiana

Alexander J. McDonald, Medicine II

The sensory pathways of man are, after many years of research, still not completely understood. As in other organ systems of the body, the structure and function of the nervous system can be more completely comprehended when its ontogeny and phylogeny have been elucidated. The purpose of this study was to investigate the brainstem sensory pathways of a primitive metatherian mammal, the opossum, whose anatomy has remained relatively unchanged since it evolved from a reptilian-like mammal 80 to 100 million years ago.

The animals were anesthetized with an intraperitoneal injection of dial-urethane and their heads were held rigid in a stereotaxic head holder. Then, either the sciatic or brachial nerves were exposed and a bipolar stimulating electrode attached. A craniotomy was performed and the brainstem was systematically explored with an extracellular recording electrode. The evoked potentials were photographed from an oscilloscope screen and their stereotaxic coordinates recorded. The brains were prepared histologically and the evoked potentials were correlated with the microscopic anatomy by the use of the stereotaxic coordinates.

Four major afferent pathways appear to be present in the oppossum: the beginnings of a medial lemniscus system, an anterolateral tract which is thought to be homologous with the spinothalamic tract in higher mammals, and two tracts which are considered to be phylogenetically older, the central tegmental tract and another system which ascends through the central gray. The upper extremity sends many more fibers to diencephalic levels. Further analysis is necessary to discern the exact terminations of these paths.

Carcinoembryonic Antigen and Polyposis Coli

Roxann Powers, Medicine II

This study evaluated CEA titers in polyposis coli patients, patients with various carcinomas and healthy volunteers to determine: (1) if CEA blood values could become a useful test in the evaluation of therapy in patients having cancer, (2) the response of the CEA test to conditions other than cancer and (3) the response of the CEA test in a healthy volunteer.

The CEA titers were determined by radioimmunoassay by Hoffman-LaRoche Laboratories. Following the technique recommended by Hoffmann-LaRoche, 10 ml. of plasma was collected and frozen. Reports were in nanograms per milliliter of plasma. In personal communication, Hoffman-LaRoche has reported that 97 per cent of the healthy volunteers studied have CEA values lower than 2.5ng./ml., but emphasize that a titer below or above 2.5ng./ml. cannot be taken as proof of the absence or presence of malignant disease.

The CEA titers of 45 individuals have been determined and classified in four groups: 0 to 2.5ng./ml., 2.6 to 5.0ng./ml., 5.1 to 10.0ng./ml., and > 10ng./ml.—Five of the 18 polyposis patients had titers in the 2.6 to 5.0ng./ml. range and 13 had titers in the 0 to 2.5ng./ml. range, indicating no significant trend of elevation of CEA in polyposis patients. Pre-op and post-op patients were included in this group. In evaluating the effect of therapy on CEA, one cancer of the rectum patient was studied pre-op, 15 days post-op and 30 days post-op. The CEA titers were 3.8ng./ml., 5.1ng./ml., and 2.0ng./ml., respectively. Of seven patients with cancer of the head and neck, two had titers in the 0 to 2.5ng./ml. range, two in the 2.6 to 5.0ng./ml. range, two in the 5.1 to 10.0ng./ml. range, and one had a level of 19.7 ng./ml., indicating possible association of CEA elevation in cancer of the head and neck. Fourteen healthy volunteers were included in the study. Thirteen fell within the 0 to 2.5ng./ml. range and one had two consecutive titers within a month which were 5.2ng./ml. and 2.7ng./ml. respectively. Finding no indication of disease in the latter, the elevated titer is unexplainable. In evaluating cigarette smoking as a condition effecting CEA titers, a slight increase in titer was seen in smokers as compared to non-smokers.

The Effects of Succinylcholine on the Ultrastructure of Normal And Chronically Denervated Rat Skeletal Muscle

Howard I. Schiff, Medicine III

In recent years it has become apparent that clinical doses of succinylcholine, a widely used neuromuscular blocking agent, may cause increased serum levels of potassium, myoglobin and creatine phosphokinase. This phenomenon has been observed in both "normal" patients as well as those suffering from peripheral and central neural lesions.

Several investigators believe that succinylcholine may cause anatomical alterations of the skeletal muscle cell membrane which can result in the release of myoglobin, potassium and CPK. The purpose of this investigation, therefore, is to demonstrate any ultrastructural alterations in the sarcolemma of normal or denervated rat skeletal muscle following succinylcholine administration.

The ultrastructure of normal and chronically denervated (7, 14, 21 and 28 days) rat skeletal muscle was studied both with and without pretreatment with succinylcholine. Conventional electron microscopic methods were used throughout the study.

The results of this study demonstrate that sarcolemmal breaks do not occur in normal or denervated rat skeletal muscle. Futhermore, succinylcholine administration did not appear to induce membrane alterations in either of the muscle groups. These data, therefore, do not support the hypothesis that sarcolemmal breaks occur following succinylcholine challenge in normal or denervated skeletal muscle.

T-Cells in Human Palatine Tonsils

Howard L. Shackelford, Medicine II

THE tonsils of man have been shown by a variety of immunochemical techniques to produce all major classes of immunoglobulins (J. of Immunol. 3:183, 1973). They have been classified as a part of the gut-associated lymphoid tissue (GALT) which is considered to be the mammalian bursal (B-cell) equivalent (Exptl. Cell. Res. 49:87, 1968). They have also been found, however, to have some thymic components (Acta. Otolaryn. 75:527, 1973).

The active rosette test is considered specific for thymic dependent lymphocytes (T-cells) (Trans. Assoc. Am. Physicians 84:239, 1971). Using this procedure, we determined the percentage of T-cells populating the tonsils of 11 tonsillectomy patients. Tonsil-derived lymphocytes (TDL) were extracted according to the method of Sloyer and Veltri (J. of Immunol. 3:183, 1973) and layered on a Ficoll-Hypaque gradient. Also, 20 ml. of venous blood was obtained for peripheral circulating lymphocytes (PCL). These lymphocytes were split into two aliquots each: one processed for rosette formation (NEJM 288:710, 1973) and the other processed for lymphocyte blastogenesis (PHA test) (In vitro Methods in Cell-Mediated Immunity, 433, 1971).

The results of the rosette test indicate that, as a group, the TDL preparations have the same distribution of rosette forming cells as do the PCL. The PHA test showed blastogenesis in both the TDL and PCL preparations. Three TDL-PCL preparations were cultured *in vitro* and stimulated with PHA. Migration-inhibitory factor (MIF) was assayed by the capillary tube method. As early as one day after addition of PHA, MIF was demonstrable and persisted through day five.

Using direct in vitro correlates of cell-mediated immunity and the active rosette test, both TDL and PCL behave similarly. Hence, the human palatine tonsils possess both T- and B-cell effector mechanisms. These results may have some bearing on problems of recurrent tonsillitis.

Effect of Colon Carcinogens on DNA, RNA, And Protein Formation of Colon Muscosal Cells

Margaret Simpson, Medicine II

BY means of administering a known colon carcinogen to rats, the appearance of colon mucosal cell transformation before the detection of gross cancer was studied. This growth process was then compared to colon mucosal cell growth seen in polyposis coli patients.

1, 2 - Dimethylhydrazine (150mg./kg.) was injected subcutaneously three times at two-week intervals in rats with descending colostomies and isolated rectal pouches. The rats were sacrificed at various times, and colon and rectum mucosa were incubated with tritiated thymidine, uridine and leucine. The percentage of labeled cells was counted in lower, middle and upper crypts of Lieberkuhn of each radioautograph.

In the isolated rectum and in untreated rats, DNA, RNA and protein synthesis were most active in the lower one-third of the crypts. In the colon mucosa exposed to the fecal stream, cell replication and protein synthesis increased in the middle and upper crypts after six weeks, and after 17 weeks the activity was highest in the upper one-third of the crypts. Adenomatous polyps appeared at 17 weeks, and at 33 weeks the rat developed metastatic cancer. This carcinogen-induced change in rat colon mucosa is similar to that seen in colon mucosa of patients with Gardner's syndrome and/or polyposis coli.

Special Article

Tests For Predicting Essential Hypertension

Edward J. Van Liere, Ph.D., M. D.; and J. Clifford Stickney, Ph. D.

There is presently a marked interest in blood pressure levels in man; for example, the month of May of this year was designed "National High Blood Pressure Month." The campaign against hypertension is being sponsored by the American Medical Association, the American Heart Association, the National Medical Association, the Citizens for Treatment of High Blood Pressure, and the United States Department of Health, Education and Welfare. The Committee of the American Medical Association recommends that physicians measure the blood pressure of every patient they see. The Committee recommends further that patients with a diastolic pressure averaging 105 mm. of Hg. or higher in three separate follow-up visits usually need drug therapy; whereas, patients whose diastolic pressure are in the 90 to 104 range should be followed by the physician.

Since hypertension is found in so many people, probably from 10 to 15 per cent, it is quite proper that blood pressure levels be determined in all patients. It is known, of course, that blood pressure most frequently rises in the third and fourth decade of life. Some physicians feel that there is a normal tendency of blood pressure to rise with age. This is a debatable point. Dr. Carl Wiggers, the late eminent cardiovascular physiologist held that a systolic pressure of 140 mm. Hg. and a diastolic pressure of 90 mm. Hg. were the ceilings for readings under basal conditions at all ages. This is probably a rather conservative view, although the authors of this paper are inclined to agree with Doctor Wiggers.

Since so many people develop some form of hypertension as they grow older, it would be highly desirable if a procedure could be found which might be used on young adults to predict the possibility of some form of hypertension in later life. Hines and Brown[1] had this in mind when they developed the cold-pressor test. About the time this test was in vogue the physiology department of the School of Medicine of West Virginia University ran a cold-pressor test on all the sophomore students enrolled in physiology between the years 1945 to 1963 inclusive. A total of 661 students were tested.

The Authors

- **Edward J. Van Liere, Ph. D., M. D., Emeritus Dean and Emeritus Professor of Physiology and Biophysics, West Virginia University School of Medicine, Morgantown.**
- **J. Clifford Stickney, Ph. D., Professor of Physiology and Biophysics Emeritus, WVU.**

Procedure

The procedure essentially proposed by Hines and Brown was followed. The subject was requested to lie down until a normal blood pressure could be obtained. The hand, up to the wrist, was immersed in ice water; the blood pressure was then taken at the end of 30 seconds and at the end of one-minute of immersion. After removal of the hand from the ice water the blood pressure was immediately taken and this was repeated until the pressure returned to normal. Only the systolic pressure was determined, and the auscultatory method was used with a sphygmomanometer of either the mercury or aneroid type. Only the students who had a rise of 20 mm. Hg. or more or had a duration of elevated blood pressure of more than 10 minutes were chosen for this study. The latter students, 66 in number, belonged to the "reactor group," according to the suggested classification of Hines and Brown.

Results

A scatter plot of the cold-pressor rise against both systolic and diastolic blood pressure readings, which had been obtained in the sitting position under resting conditions, was made. The group average was 121 mm. Hg. systolic pressure and 80 mm. Hg. diastolic pressure. The plot shows that there is no connection between the systolic pressure rise produced by the cold-pressor test at either the level of resting systolic or diastolic pressures. The average pressor rise was 25 mm. Hg. and the average duration was 5.5 minutes. Of the 66 students included in this report, there were seven whose pressor responses were of the reactor type and who also had significant high diastolic pressure readings (between 90 and 110 mm. Hg.). Aside from these exceptions, our conclusion was that our

results confirmed the repeated findings of others that the cold-pressor test has no virtue as an indicator of hypertensive tendency.

Discussion

The material presented confirms the work of a number of investigators that the cold-pressor test is not reliable for prediction of hypertension in later life. For practical purposes, we chose to use only the systolic blood pressure. It should be noted that Hines recommended that a rise in diastolic pressure should be the criterion of reactivity. Since both systolic and diastolic pressures rise, however, the systolic is a valid indication of diastolic rise also.

Several other methods have been used in studying the reactivity of the cardiovascular system, such as psychic stimulation, painful stimulation and electric shocks. None of these has proved satisfactory since the reaction of the subject was so variable. As mentioned previously, it would be very helpful if a procedure could be developed which would enable physicians to determine whether a subject might later develop some form of hypertension. If the procedure were reasonably accurate and the test indicated that the subject might at a later time develop essential hypertension, his physician could periodically measure the subject's blood pressure. In the event that there was a significant rise in the diastolic pressure, antihypertensive therapy could be instituted.

Presently, it appears that there are two criteria which may be helpful in determining whether hypertension may develop in an individual in later life. One is the factor of heredity. There is substantial evidence that if a patient's parents or grandparents have suffered from hypertension during their lifetime, their descendants may have inherited this tendency. In many instances the patient will know whether hypertension is a familial trait.

A second factor of importance is excessive variability of systolic blood pressure in young individuals. In recent years, a number of workers have suggested that excessive variability of systolic blood pressure is an intermediate stage in the development of hypertension in later life. This hypothesis, however, has not been proved.

Some recent experiments[2] performed on young rats appear to show that variability in systolic blood pressure may be a factor in predicting the development of hypertension later. In essence, it was observed that 11 of 40 normotensive control rats showed, at times, an average weekly systolic blood pressure above the level of the usually accepted controls. The 11 animals were regarded as "borderline hypertensives." These data provide the first objective evidence that animals with borderline hypertension presumably have a greater lability of systolic pressure than their normotensive counterparts. The data are still not complete for it has to be determined whether these latter rats will eventually develop essential hypertension. The question also remains whether the observation made on rats can be directly applied to man.

The two factors just mentioned, namely heredity and an excessive labile blood pressure, are probably the best objective tests we presently have to predict the development of essential hypertension in later life. The cold-pressor test theoretically was a good quantitative test but, unfortunately, did not prove reliable.

It must be borne in mind, however, that not all individuals whose blood pressure is labile or who have a family history of hypertension, may necessarily develop hypertension. In the final analysis, an early diagnosis of essential hypertension is highly important because it is now possible to control this rather common condition. If the latter is done, there is good evidence that the danger of common sequelae of hypertension, such as coronary disease, strokes, cardiomegaly, retinal and renal damage is greatly lessened.

Summary

The cold-pressor test was performed on 661 sophomore medical students at West Virginia University School of Medicine enrolled between the years 1945 to 1963 inclusive. Only the students who had systolic rises of 20 mm. Hg. or more or had a duration of elevated pressure of 10 minutes or more were chosen for this study. There were 66 of these and they belonged to the reactor group according to the suggested classification of Hines.

Of the 66 students, there were only seven whose pressor responses were of the reactor type and who also had significantly high diastolic pressure readings (between 90 to 110 mm. Hg.). Aside from these exceptions, our conclusion is that these results confirm the finds of others that the cold-pressor test has no virtue as an indicator of hypertensive tendency. An accurate test for predicting essential hypertension in later life is still to be found. Presumably, the two best diagnostic criteria for predicting hypertension in later life is the factor of heredity or an extremely labile blood pressure manifested in early life.

A list of references may be obtained by writing The Journal.

A Continuing Medical Education Event!

Such sponsors and participants as the West Virginia State Medical Association; West Virginia Diabetes Association; West Virginia Heart Association; West Virginia Lung Association and its Kanawha County Council; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; Kanawha Medical Society and Woman's Auxiliary to the Kanawha Medical Society; West Virginia Division, American Cancer Society; West Virginia Chapter, American Academy of Pediatrics.

are pleased to announce

"The Eighth Mid-Winter Clinical Conference"

Daniel Boone Hotel

Washington and Capitol Streets
Charleston, West Virginia

2 P.M. and 8 P.M. Friday, January 24
9:30 A.M. and 2 P.M. Saturday, January 25
9:30 A.M. Sunday, January 26

THE PROGRAM again will offer a wide-ranging clinical and educational experience for the practicing physician. FRIDAY AFTERNOON, January 24, session on heart diseases; FRIDAY EVENING, presentations will include PSRO's and a session open to the public on the "problems of adolescents." A medically oriented program on problems of adolescents will be held SATURDAY MORNING, January 25 with these other scheduled subject areas to follow: SATURDAY AFTERNOON, cerebral vascular diseases and diabetes; SUNDAY MORNING, January 26, pulmonary disease in adolescents, cancer and "How to Avoid Malpractice."

THE FACULTY will include outstanding specialists in their fields from various educational and other settings, both outside and from within West Virginia.

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

FOR ADVANCE REGISTRATION, please complete the form below and mail to: WEST VIRGINIA STATE MEDICAL ASSOCIATION, P. O. BOX 1031, CHARLESTON, W. VA. 25324.

- -

Please register me for the Eighth Mid-Winter Clinical Conference in Charleston, W. Va., January 24-26, 1975. My $15 registration fee is (is not) enclosed.

I will attend sessions at 2 P. M. Friday, January 24 ..... 8 P. M. Friday ..... 9:30 A. M. Saturday, January 25 ..... 2 P. M. Saturday ..... 9:30 A. M. Sunday, January 26 ..... All sessions .....

Name (please print) _____ *Specialty* _____

Address _____ *City* _____

A message from . . .

The President

WESTWARD HO!

TRAVELING to the great Northwest in a wide-body jet is a far cry from the hardships of Lewis and Clark when they inched their way across the High Country by flatboat and moccasin. And although three jets went down across the world during our trek to the AMA Clinical Session in Portland, we were never confronted by hostile Sioux nor hungry grizzlies!

The membership of the West Virginia State Medical Association is referred to the December 9 issue of *American Medical News* for an excellent summarization of the activities in Oregon. Generally speaking, West Virginia Delegates to the AMA responded with a very restless majority of delegates to hold down operating costs, retain journal advertising, review publishing activities, provide greater independence to the Interns and Residents Business Session, and to concentrate on the many challenges facing all of us in Medicine today. To the latter, your officers in the West Virginia State Medical Association are dedicated.

The advent of the New Year raises hopes that we can improve upon past experiences. The Mid-Winter Conference in Charleston, January 24, 25 and 26, *and* the next session of the West Virginia Legislature will be our immediate opportunities. Participate in the Conference for personal and patients' benefit; and let's make ourselves available to Legislators that they may benefit from our medical expertise and unique position in the health field for the welfare of West Virginians everywhere!

Happy New Year to all,

Bill Gilmore

WILLIAM E. GILMORE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

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EDITORIALS

CANCER OF THE BREAST

A relatively recent article in *The Proceedings of the Royal Society of Medicine*[1] reviews briefly certain findings of the International Study of Breast Cancer. It is emphasized that both the incidence and death rate of breast cancer varies greatly in different countries; for example, the age-standardized annual incidence from cancer registries is 59 per 100,000 in Connecticut, and 13 per 100,000 in Tokyo. In England and Wales carcinoma of the breast is the leading cause of death from cancer among women, and accounts for more than 10,500 deaths per year.

The international study was conducted from seven centers representing areas of high incidence of cancer (Boston, USA), and Glamorgan, Wales); intermediate incidence (Athens, Slovenia and Sao Paulo); and low incidence (Tapei and Tokyo).

It was observed that the risk was from 35 per cent to 50 per cent higher in single than in married women. Amongst the married women the incidence was higher among the infertile than the fertile, and tended to decrease with increasing parity. Contrary to the belief of many, there was no evidence to suggest that lactation or duration of lactation gave any further protection against development of breast cancer.

An extremely interesting observation was that breast cancer risk in those women who had a child before they were 18 years of age was less than one-third of risk of those having their first child after their 35th birthday.

The conclusions were that women who have had no children are at higher risk to cancer of the breast than women who have borne children, but that lactation has nothing to do with this. It also was concluded that the protection afforded by child bearing is closely related to the mother's age at first birth, but the number of pregnancies probably has nothing to do with it; however, although age at first pregnancy is an important item it actually plays but a small part in the international differences in the incidence of breast cancer. Presumably a more important factor is the social gradient with higher mortality in the higher social classes.

It is possible that the international differences may partly be due to differences in diet in the various countries. Apparently, the whole matter needs further intensive study.

1. Lowe, C.R. Proceed. Royal Soc. Med. 67: 24, 1974.

State medical journals have received another vote of confidence from their readers.

STATE MEDICAL JOURNALS HEAD THE LIST

This year, 10 of the state journals in the 36-journal group to which this journal belongs were tested by a professional research group in Philadelphia and set a record of which we may be very proud.

The testing mechanism, which is as objective as it is possible to be, consists of attaching valid bank checks for $5.00 to advertising pages and then counting the number of checks which are cashed within 10 weeks after mailing.

The journal copies to be decorated with the checks are selected by an independent certified public accountant. Physicians' names are chosen from the mailing list by serial numbers so that the selection is completely at random.

The checks are distributed through the various journal copies so that, in the end, each one of the advertising pages has been labeled as often as all the other ad pages in that issue.

During 1973 and 1974 the state journal group and 16 of the most popular nationally distributed association sponsored and commercial medical publications were tested by this technique.

The 10 state medical journals had an average score of 35 per cent. This is an extremely high response. Usually returns on such tests are considered good if they are between 20 and 25 per cent.

The scores for the other 16 national publications varied from 34.6 per cent down to 15.4 per cent. The state journal group was at the head of the list.

Measuring a publication's ad-page-exposure record by the $5.00 check technique is the most reliable method yet devised. Every effort was made by the researcher to assure the highest standards of precision and accuracy. Standard procedures, without deviation, were employed on all journals.

The entire process is scrupulously conducted so as to avoid bias. The results may be accepted as truly indicative of a publication's ability to attract and interest its readers, the physicians. All state journals may feel complimented and honored by such a study.

Corroborative evidence of the high readership of state journals is furnished by another type of reader interest study which was done by Medico Media Audit in June and July of last year. State medical journals as a group headed the list of the 10 publications which were studied.

These two readership audits are considered the most objective and most reliable of all the advertising surveys. The fact that state journals are at the top of each list indicates a consistency and reliability of a medical journalism medium which is most commendable.

PREDICTION TESTS FOR DEVELOPMENT OF HYPERTENSION

It is hoped that the present interest manifested in screening subjects for hypertension continues and will aid many people. Such a screening process is particularly of value to young adults. What is needed is a test which applied to young people is capable of predicting essential hypertension in later life. Such a test has as yet not been found. Elsewhere in this issue of *The Journal* may be found an article which discusses certain prediction tests. In the past, several methods have been used to study the reactivity of the cardiovascular system, such as psychic stimuli, painful stimuli, and electric shocks. None of these has proved satisfactory, since the reaction of the subjects was too variable.

In 1932 Hines and Brown[1] of the Mayo Clinic formulated the cold-pressor test and for a number of years this test was widely used. Although based on a scientific principle and quantitative in nature, it has been found wanting by several investigators. The article in this issue of *The Journal* which deals with the cold-pressor test on 661 sophomore medical students between the years 1945 and 1963 simply corroborates the findings of earlier workers, namely that the cold-pressor test has no virtue as an indicator of hypertensive tendency. This is a pity, for presently there presumably are only two acceptable criteria which may be used for predicting essential hypertension in later life. One, an inherited tendency of hypertension and the other an excessive variability of blood pressure during youth.

In the final analysis, a reasonably accurate test which would indicate in young individuals that they might develop essential hypertension in later life would be extremely valuable. Such individuals should have their blood pressure checked periodically, and if the blood pressure rose significantly above the accepted level, especially the diastolic pressure, anti-hypertensive therapy could be initiated. Early control of elevated blood pressure would greatly lessen the danger of common sequelae of hypertension, such as coronary disease, strokes, cardiomegaly, retinal and renal damage.

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1. Hines, E.A. and G.E. Brown. Mayo Clinic Proceed. 7: 332, 1932.

GENERAL NEWS

Plans Completed For Mid-Winter Clinical Conference Program

Plans are now complete for the Eighth Mid-Winter Clinical Conference to be held Friday afternoon through Sunday morning, January 24-26, in Charleston at the Daniel Boone Hotel.

The annual continuing education event is sponsored by the State Medical Association in conjunction with other organizations—numbering 13 for 1975. The Conference offers a program of diverse clinical presentations dedicated to West Virginia's practicing physicians. Participating in this year's program will be 15 principal speakers.

James C. Respess, M.D.

G. Robert Nugent, M.D.

The Conference Planning Committee is expecting a record attendance again this January. In order to accommodate the growing attendance, the Conference site has been changed to the Daniel Boone, where all main sessions will be held in the Ballroom.

Conference Hotel Remodeled

The Conference Co-Chairmen, Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, pointed out that a factor in making the decision to move to the Daniel Boone was that the hotel has been completely remodeled, including both guest rooms and public areas. The hotel announced that its $750,000 renovation program was to be completed in December.

The pregram for this year's Conference was revised to conclude at noon on Sunday, providing time for participants to return home during the afternoon. Previous conferences have ended late Sunday afternoon.

Friday Afternoon

The 1975 Conference will open at 2 P. M. on Friday, January 24, with opening remarks to be delivered by Dr. Hartwell G. Thompson, Dean of the Charleston Division of the West Virginia University Medical Center. Presiding at the opening session on heart disease will be Dr. John W. Traubert, Chairman of the Department of Family Practice at WVU. The speakers and their topics will be "The Use and Abuse of Cardiac Drugs," Stafford G. Warren, M. D., Charleston cardiologist; "Cardiac Emergencies in Children," Nancy Wanderman, M. D., Assistant Professor of Pediatrics, Pediatric Cardiology, Charleston Division, WVU; "Present Status of Pre-Hospital Coronary Care in West Virginia," William H. Carter, M. D., cardiologist, Charleston Area Medical Center; and "Concepts of Sudden Cardiac Deaths in Pre-Coronary Care," Richard S. Crampton, M. D., Associate Professor of Medicine and Director, Coronary Care System, University of Virginia.

A Cardiopulmonary Resuscitation Demonstration to be conducted by the CPR Committee of the American Heart Association, West Virginia Affiliate, will be held from 1 to 5 P. M. on Friday and from 8:30 A. M. to 5 P. M. on Saturday. The demonstration will emphasize lay education.

Friday Evening

Concurrent sessions will be held at 8 P. M. Friday. Dr. Harry S. Weeks, Jr., of Wheeling, will preside at one of the evening sessions on "PSRO Revisited One Year Later." The speakers will be Dr. James C. Respess, Professor of Medicine, University of Virginia Hospital; and William C. Felch of Rye, New York.

The other session, entitled "The Problems of Adolescents," will be open to the public. Presiding will be Dr. Herbert H. Pomerance, Director of Pediatrics, Charleston Area Medical Center; and Professor of Pediatrics, Charleston Division, WVU. The speakers and their topics will be "Human Sexuality and Youth, A Timely Challenge," U. G. Turner, III, M. D., Clinical Assistant Professor, Department of Obstetrics and Gynecology, University of Virginia School of Medicine; "Teenage Suicides," Ralph S. Smith, Jr., M. D., Charleston psychiatrist; and "Drugs and Alcoholism Among Teenagers," Paul Travis, M. D., Director, District of Columbia Department of Human Resources Rehabilitation Center for Alcoholics, Occoquan, Virginia.

The Woman's Auxiliary to the Kanawha Medical Society is sponsoring the public session. The speakers for that session also are scheduled for the medically-oriented session on "The Problems of Adolescents" Saturday morning, January 25. Dr. W. Gene Klingberg, Professor and Chairman, Department of Pediatrics, WVU, will preside. Preceding this session will be a breakfast meeting of the Board of Trustees, West Virginia Medical Institute, Inc.

Saturday Luncheon Meetings

During the noon recess, there will be luncheon meetings of the West Virginia Chapter, American Academy of Family Physicians; the Board of Directors, American Diabetes Association, West Virginia Affiliate; Section on Orthopedic Surgery, West Virginia State Medical Association; and the Annual Meeting of the West Virginia Thoracic Society.

Saturday Afternoon

A session on vascular disease will begin at 2 P. M. Saturday. Presiding will be Dr. Hartwell G. Thompson. The speakers and their topics will be "The Diagnosis and Medical Management of Cerebral Vascular Disease," Arthur L. Poffenbarger, M. D., Charleston neurologist; "The Surgical Management of Cerebral Vascular Disease," G. Robert Nugent, M. D., Professor and Chairman of Neurosurgery, WVU; and Harvey C. Knowles, Jr., M. D., Professor of Medicine at the University of Cincinnati College of Medicine.

Sunday Morning

A breakfast meeting of the West Virginia Chapter, American Society of Internal Medicine, will begin the activities on Sunday, January 26. The final session of the Conference will be held that morning. Presiding will be Robert C. Parlett, M. D., Ph. D., Vice President for Health Sciences and Dean of the Medical School, Marshall University. The speakers and their topics for this session will be "Pulmonary Disease in Adolescents," C. E. Buckley, III, M. D., Associate Professor of Medicine and Assistant Professor of Immunology, Duke University Medical Center; "Cancer Rehabilitation and the American Cancer Society," Raymond H. Bunshaw, M. D., Southern Area Vice President for Medical Affairs, American Cancer Society, Atlanta, Georgia; and "How To Avoid Malpractice Suits," Stanley Preiser, Charleston attorney.

Kanawha Medical Society Offers Social Event

Physicians, wives and others attending the Mid-Winter Clinical Conference are invited to the annual dinner dance of the Kanawha Medical Society which will be held Saturday, January 25, in the Daniel Boone Hotel ballroom beginning at 7 P. M. The affair will include cocktails, dinner and dancing. Dress will be formal.

The cost will be $12.50 per person. Advance registration is requested. Registrations and advance payment, if desired, should be sent to the Kanawha Medical Society, 405 Atlas Building, Charleston 25301. Payment also may be made at the door. Checks should be made payable to the Kanawha Medical Society.

All registrations should be in by January 21.

Raymond H. Bunshaw, M.D.

Stafford G. Warren, M.D.

Conference Registration

Registration will be held in the lobby adjacent to the ballroom on Friday beginning at 1 P. M. and on Saturday and Sunday beginning at 8 A. M. A fee of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents.

Approved By AMA And AAFP

The Conference has been approved for 12 hours of credit in Category 1 of the Physician's Recognition Award of the American Medical Association —and for 12 hours of Prescribed Credit by the American Academy of Family Physicians.

Also serving on the Planning Committee are Drs. William O. McMillan, Jr., of Charleston and C. Carl Tully of South Charleston.

The other sponsors for 1975 are:

The American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; Section on Orthopedic Surgery, West Virginia State Medical Association; and the West Virginia Chapter, American Academy of Pediatrics.

Dr. Stephen D. Ward Named Member Of AMA Legislative Committee

Dr. Stephen D. Ward of Wheeling was honored recently when notified he had been named by the Board of Trustees to serve as a member of the Council on Legislation of the American Medical Association. His service on the Council began officially on January 1.

The Council is one of the most influential in the national organization and its members are responsible for helping to formulate legislative policy working with the United States Congress.

Stephen D. Ward, M.D.

Doctor Ward, a practicing psychiatrist in Wheeling, has been active for many years in legislative affairs of the West Virginia State Medical Association and served for four years as a member of the Council of the Association. He also serves as a member of the Board of Directors of WESPAC and has helped organize and serve on a variety of campaign committees at the local, state and national levels.

During the past five years Doctor Ward has served as an Associate Editor of *The West Virginia Medical Journal*. Many of the editorials he has written have been reprinted and quoted in newspapers and magazines throughout the country and his insight and judgment in regard to the nature and origin of problems and difficulties affecting the medical profession are widely respected and valued.

Doctor Ward received his M.D. degree in 1954 from the University of Pittsburgh School of Medicine and served an internship at Mercy Hospital in Pittsburgh. He served a residency at the Western Psychiatric Institute and Clinic of the University of Pittsburgh School of Medicine, 1955-58.

He located his practice in Wheeling in 1962 and is a Past President of the Ohio County Medical Society.

Dr. Ladewig Elected Chairman Of Postmortem Commission

Dr. Peter P. Ladewig of Charleston recently was elected Chairman of the State's Commission on Postmortem Examinations. Doctor Ladewig is Chairman of the Pathology Division at the Charleston Area Medical Center.

Dr. Howard D. Marcus of Hundred was elected Vice Chairman.

The law establishing the Commission and the State Medical Examiners office was passed by the Legislature in 1963 but was denied proper funding until last year. The new Commission voted unanimously to establish headquarters for the Chief Medical Examiner in conjunction with the Charleston Division of the West Virginia University Medical Center. The new examiner has not been named.

Peter P. Ladewig, M.D.

The funding of the office last year was a milestone for the State Medical Association, which had urged its establishment since the fifties and had pressed for its funding since the law was passed more than a decade ago. A resolution was passed during the 104th Annual Meeting of the Association in 1971 urgently recommendisg the funding of the Medical Examiner's Act. A $190,000 federal grant was obtained in 1973 to help finance the program.

Doctor Ladewig is a Fellow in the American Academy of Forensic Sciences and one of a few to hold that distinction in the United States. Born in Berlin, Germany, he received his M.D. degree in 1933 from the University of Berlin. He did postgraduate work in pathology there and at the University of Istanbul (Turkey). He began practice in West Virginia in 1953. Doctor Ladewig is recognized in courts and police circles throughout the State for his postmortems in criminal and civil cases.

Other members on the Commission are State Police Superintendent R. L. Bonar, Charleston attorney Patrick Casey and Carl B. Williams, Morgantown funeral director.

Dr. Albert C. Esposito Honored By Loyola University

Dr. Albert C. Esposito of Huntington received the "Stritch Medal" from the Loyola University of Chicago Stritch School of Medicine during a dinner meeting in Chicago on November 19.

A Past President of the West Virginia State Medical Association and the Southern Medical Association, Doctor Esposito was recognized for his "significant work as an opthalmologist, teacher and leader in medical and civic affairs."

The Stritch Medal is awarded each year to a physician, medical educator or medical researcher who displays to an outstanding degree professional competence, resourcefulness, benevolence and dedication to his chosen field.

In the picture accompanying this article Doctor Esposito is shown receiving both the medal and plaque presented by Father Raymond Baumhart, S.J., President of Loyola University. Previous recipients of the Stritch Medal have included Dr. Christiaan Barnard, a pioneer in heart transplants, and the Founder and President of Project HOPE, Dr. William B. Walsh.

(Another article and a more complete biographical sketch of Doctor Esposito was published in the December 1974 issue of *The Journal*)

Auxiliary's AMA-ERF Chairman Reports On Grant Results

The American Medical Association Education and Research Foundation (AMA-ERF) supplied the nation's 114 medical schools with $1,250,000 in unrestricted grants in 1973, according to Mrs. Paul Francke, Jr., of Charleston. Mrs. Francke is Chairman of the AMA-ERF Committee of the Woman's Auxiliary to the State Medical Association.

Mrs. Francke said that physicians and their wives are the heaviest contributors to AMA-ERF, with 100 per cent of every tax deductible dollar contributed to the Foundation going for the purpose designated. All fund-raising costs are borne by the AMA.

The West Virginia University School of Medicine received $16,980.98 from AMA-ERF in 1973, Mrs. Francke said. These funds were used as matching funds for the federal scholarship funds. As such, she continued, $9 was generated for every $1 donated.

Mrs. Francke said donors may designate the medical school or the student loan fund of their choice when they make tax deductible donations. One dollar donated to the student loan fund frees $12.50 for student, intern or resident loans. She said that 94 per cent of these loans are paid back promptly as compared to the 60 per cent of federal loans that are repaid. Requests for loans are greater than ever because of inflation.

Mrs. Francke said AMA-ERF donors are being asked to increase their contributions "in the light of spiralling costs."

Doctor Pulliam Named President Of Ob.-Gyn. Society

Dr. Robert P. Pulliam of Beckley was named President of the West Virginia Obstetrical and Gynecological Society during a recent meeting of that organization which was held at Oglebay Park in Wheeling.

Other new officers include Dr. Samuel J. Bracken of Wheeling, Vice President; and Dr. T. Keith Edwards of Bluefield, Secretary-Treasurer. The Immediate Past President is Dr. John J. Battaglino, Jr., of Wheeling.

Symposium at the Homestead

A four-day medical symposium on "Recent Advances in Allergy" will be held at the Homestead in Hot Springs, Virginia, April 21-24.

The scientific sessions will be held during the morning hours and the speakers will present a wide variety of material of interest to all practitioners.

For further information, please contact Claude A. Frazier, M. D., 4-C Doctors Park, Asheville, North Carolina 28801.

Business was the name of the game for West Virginia's two delegates to the AMA Clinical Convention held recently in Portland, Oregon; however, Drs. Frank J. Holroyd, left, and Richard E. Flood, right, found time to pose with AMA President Malcolm C. Todd during a few moments of relaxation between sessions of busy and sometimes hectic meetings of the House of Delegates and Reference Committees.

Mrs. Edward O. Lewis Named Head Of Heart Fund Campaign

Mrs. Edward O. (Shirley) Lewis of Charleston has been named State Chairman of the 1975 West Virginia Heart Association campaign. Mrs. Lewis, the State Field Manager of Welcome Wagon International, will assist County Heart Fund Chairmen with their local campaigns.

Mrs. Lewis received a bachelor's degree in home economics from West Virginia University. In addition to her work with the State Heart Fund, she is involved in woman's club, home economics and mental health activities.

The 1975 Heart Fund campaign goal is $318,000, according to Richard H. Heal, D. D. S., of Clarksburg, who served last year as Chairman of the State Fund Raising Advisory Committee.

Dr. Leo H. T. Bernstein of Martinsburg is President of the American Heart Association, West Virginia Affiliate.

WVU Dept. of Medicine Plans Internal Medicine Day

The Department of Medicine at the West Virginia University Medical Center will conduct a day-long conference on Saturday, March 8, from 8:45 A. M. to 5:00 P. M. Plans for the conference include two hour-long panel discussions with case presentations, one in gastroenterology and the other in cardiology. Each sub-specialty division also will present a paper on a common medical problem in that sub-specialty area with a theme of "What's Old and What's New" in the particular disease.

All physicians are invited to attend—in particular internists, family physicians, and house staff-in-training.

Doctor Flood Named To Joint Medicine-Nursing Commission

Dr. Richard E. Flood of Weirton has been appointed by The American Medical Association as one of eight representatives of medicine on the National Joint Practice Commission between medicine and nursing. The Commission also has an equal number of representatives recommended by the American Nurses' Association to represent nursing.

Richard E. Flood, M. D.

The purpose of the Commission is to discuss and make recommendations concerning the roles of the physician and nurse in providing quality health care.

Doctor Flood, a Past President of the State Medical Association, is Chairman of the Association's Nurses Liaison and Resolutions Committees and is a Delegate to the AMA. He also is a member of the Association's Constitution and By-Laws, WVU Liaison, and Public Welfare—Joint Conference Committees.

Doctor Flood is a Past President of the West Virginia Chapter of the American Academy of Family Physicians and is a member of the Board of Directors of the Federation of State Medical Boards of the United States. The national organization is made up of representatives of state medical licensing boards; Doctor Flood has been a member of the West Virginia Medical Licensing Board since 1969.

Hospital Medical Staff Seminar Planned For The Greenbrier

The First Annual Maryland Hospital Medical Staff Conference will be held March 2-7 at The Greenbrier in White Sulphur Springs. The five-day seminar will be conducted by the Maryland Hospital Education Institute, and the Co-Sponsors will include the State Medical Association and the West Virginia Hospital Association.

The Seminar will focus on strengthening the internal medical staff management of a hospital — not only for survival but — to direct the quality of care in today's environment. There will be discussion of organizational and managerial principles, strategies and techniques which can foster the cooperative work necessary by the hospital's governing body, medical staff and administration.

The program will be limited to 200 persons. Applications should be submitted by hospitals. A limited number of individual physician applications will be considered.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Jan. 9-11—Symp. on Late Consequences of Successful Cancer Therapy, Orlando, Fla.
Jan. 24-26—8th Annual Mid-Winter Clinical Conf., Charleston.
Jan. 24-26—AMA Natl. Leadership Conference, Chicago.
Jan. 29-Feb. 1—Southern Society for Pediatric Research, New Orleans.
Jan. 31-Feb. 2—Southern Radiological Conf., Point Clear, Ala.
Jan. 31-Feb. 2—AMA Congress on Medical Education, Chicago.

Feb. 10-13—Am. College Cardiology, Houston.
Feb. 13-15—Am. Coll. Emergency Physicians, Seattle.
Feb. 13-15—Southern Neurosurgical Soc., San Antonio.
Feb. 15-19—Amer. Acad. of Allergy, San Diego.
Feb. 17-20—Southeastern Surgical Congress, Atlanta.
Feb. 21-28—Am. Soc. of Clinical Pathologists and College of Am. Pathologists, Las Vegas.
Feb. 28-Mar. 5—Am. Soc. of Abdominal Surgeons, Orlando, Fla.
Mar. 1-4—Am. Assn. Pathologists & Bacteriologists, New Orleans.
Mar. 1-6—Am. Acad. of Orthopaedic Surgeons, San Francisco.
Mar. 6—Am. Ortho. Society for Sports Medicine, San Francisco.
Mar. 8—Conference, WVU Dept of Medicine, Morgantown.
Mar. 13-19—Am. Coll. of Allergists, Bal Harbour, Fla.
Mar. 20-21—Natl. Conf. of Rural Health, Roanoke, Va.
Mar. 30—April 4—Am. Coll. of Radiology, Portland.
Apr. 6-10—Am. Assn. Neurological Surgeons, Miami Beach.
Apr. 9-12—Am. Gynecological Soc., Phoenix, Arizona.
Apr. 14-16—Am. Assn. for Thoracic Surgery, N. Y. City.
Apr. 27-30—W. Va. Acad. of Ophth. & Otol., White Sulphur Springs.
Apr. 28-May 3—Am. Acad. of Neurology, Bal Harbour, Fla.
May 5-8—Am. Coll. of Ob. & Gyn., Boston.
May 11-15—Am. Urological Assn., Miami Beach.
June 14-19—AMA Annual Meeting, Atlantic City.
Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

It always happens so fast.
And, this time, you're right. It did happen to "the other guy."
You know: The guy who wouldn't hurt a fly, turn down a friendly drink—or take a cab home instead of driving. A nice guy who'd now and then smoke in bed, maybe swim out a little too far, sometimes hurry a little down the stairs.
We know you knew him. And that you'll miss him.
We just don't want you to join him.
"Oops" is a pitiful epitaph.

National Safety Council

If you don't like thinking about safety, think where you'd be without it.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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KEEP THE HYPERTENSIVE PATIENT ON THERAPY KEEP THERAPY SIMPLE WITH

DYAZIDE®

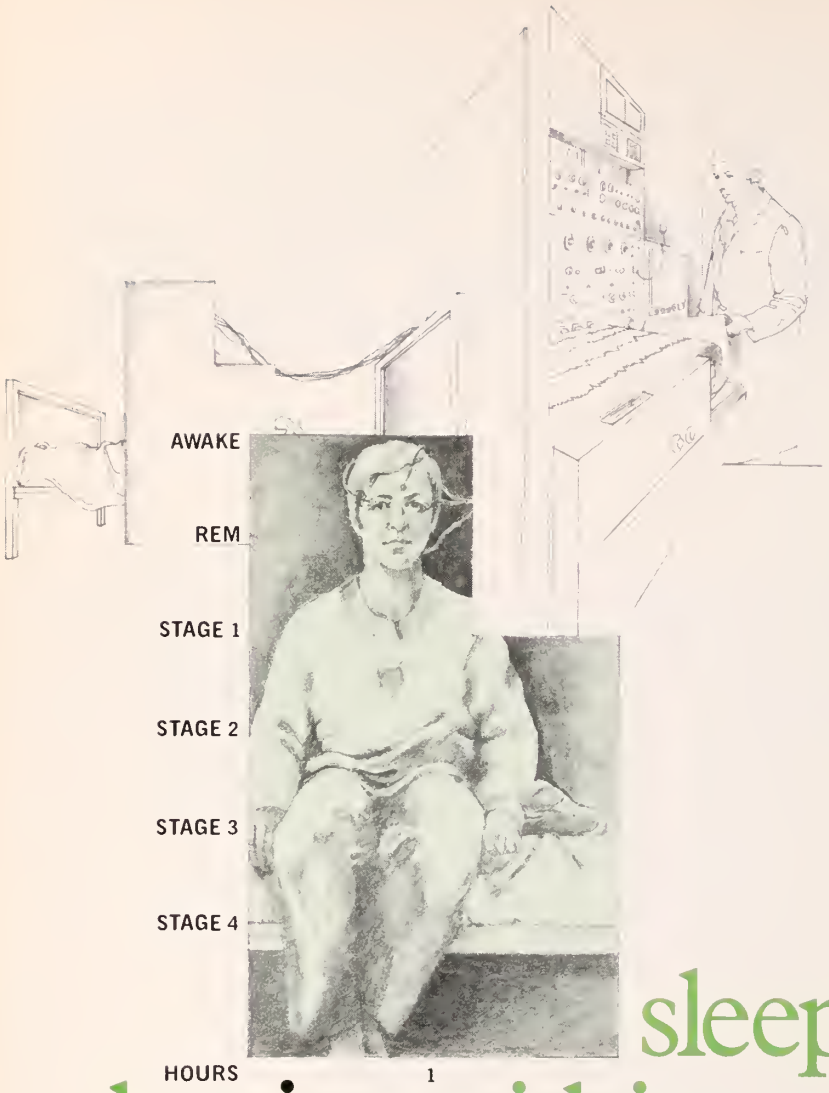
Trademark

Each capsule contains 50 mg. of Dyrenium* (brand of triamterene) and 25 mg. of hydrochlorothiazide.

Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K^+ rich diets needed as a rule

Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

TO KEEP BLOOD PRESSURE DOWN AND KEEP POTASSIUM LEVELS UP



sleep begins within 17 minutes, on average ...

an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

Average Time Required to Fall Asleep (4 Studies, 16 Subjects[2-5])

confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage.[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

when restful sleep is indicated

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

REFERENCES: 1. Kales A, *et al*: *Arch Gen Psychiatry 23*:226-232, Sep 1970
2. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
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4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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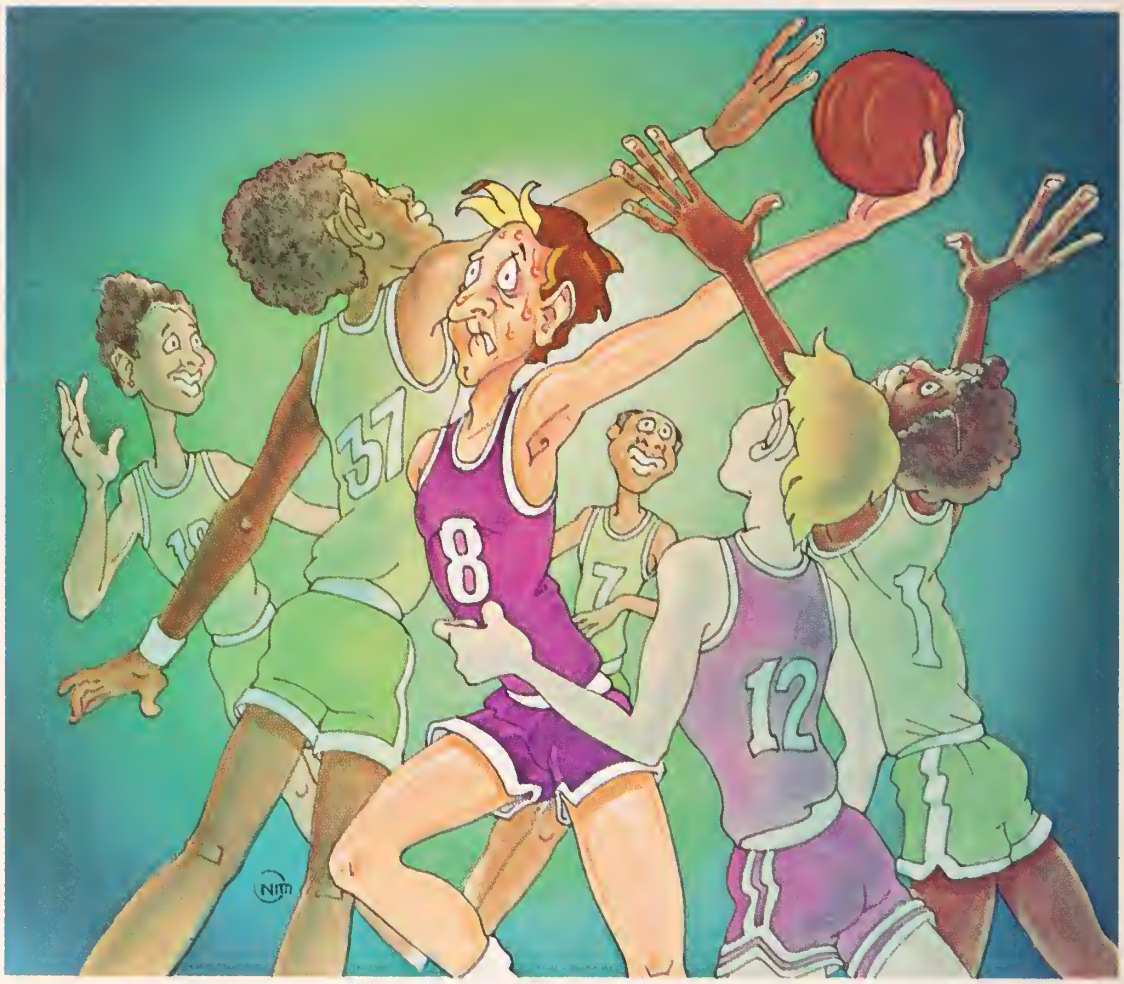
Nutley, New Jersey 07110

When diarrhea has his number...



Lomotil puts him back in the game.

Physicians and patients both want prompt control of the symptoms of diarrhea. A rapid, uncontrolled loss of fluids and electrolytes can cause a medical crisis, particularly in children, and in patients who are seriously ill, or in people who are badly undernourished.

Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ..... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate ..... 0.025 mg.

Usually stops diarrhea promptly.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d., 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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BURDICK'S EK/5A CARDIOGRAPH — NOW WITH NEW PATIENT ISOLATION

—and unique automatic lead marking

Engineering advancements that made the Burdick EK/5 highly respected by the medical profession have been retained in the new EK/5A that also gives you new patient isolation (extremely low leakage current for maximum patient safety) and automatic lead marking activated by the lead selector switch.

Important refinements have also been added: long-life gold contacts on circuit boards, fewer and smaller circuit boards, high safety margins on components.

But safety and service-free operation are not the whole story! Burdick gives you operating convenience, diagnostic accuracy, reliable performance — all in a smartly styled 17-lb. instrument.

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Write us today for a demonstration in your office.

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HUNTINGTON, WEST VIRGINIA

WVU Medical Center
–News–

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

West Virginia University School of Medicine graduate Thomas W. Crosby has joined the faculty of that school as an Assistant Professor in the Department of Neurology.

Doctor Crosby, who attended St. Louis University and the University of Pennsylvania, also received his undergraduate degree at WVU.

Following completion of his residency in neurology at the Medical Center, he spent the past year in West Germany as a Fellow in neuropathology at the University of Gottingen.

Basic Sciences Faculty Increased

Four assistant professors have been added to the basic sciences faculty at WVU.

Dennis K. Ponton, Department of Biochemistry, is a native of Welch and holds A.B., M.S. and Ph.D. degrees from WVU.

Since 1969, he has served as an assistant professor (part-time) at the Fayette Campus of Pennsylvania State University in Uniontown teaching classes in chemistry, biology and nutrition.

Before completing his graduate study in 1972, he served in various research and teaching assignments in the WVU Division of Animal Science and in the Biology Department. He has also served as a technical assistant in the Chemistry Department.

Nyles W. Charon, Department of Microbiology, comes to WVU from Stanford University, where he has been a Fellow in genetics for the past two years. A native of Minnesota, he received his A.B., M.S. and Ph.D. from that state's university.

Paul B. Brown and David G. Frazer, Jr. are new members of the faculty of the Department of Physiology and Biophysics.

Doctor Brown, who was born in Panama, received his degree in life sciences from the Massachusetts Institute of Technology, his Ph.D. in physiology from the University of Chicago and was a post-doctoral Fellow at Cornell University.

Prior to his appointment at WVU, he was a neurophysiologist at Boston State Hospital.

Doctor Frazer, a native of East Brady, Pennsylvania, received three degrees in electrical engineering from Pennsylvania State University and a Ph.D. degree from WVU in physiology and biophysics.

The officers and Executive Council of the West Virginia University School of Medicine Alumni Association assembled after a banquet during the annual Alumni Weekend last fall in Morgantown. From left (seated) are Drs. James E. Wilkerson of Tallmadge, Ohio, Vice President; Alfred D. Ghaphery, Wheeling, President; Pat A. Tuckwiller, Charleston, Chairman; (standing) Drs. T. F. Hall, II, Fairmont; J. L. Mangus, Charleston; Thomas O. Dotson, Lewisburg; Clark K. Sleeth, Morgantown, Secretary-Treasurer; and Phillip B. Mathias, Morgantown.

How to put aside $7500 a year tax free

If you work for yourself you can now put away up to $7500 a year for your retirement. And exclude the full amount on your federal income tax return.

Up to now, anybody who is self-employed was allowed a special tax deduction for retirement funds of only 10% of earned income with a limit of $2500. Now a Congressional act has changed all that. To an annual amount of 15% with a $7500 limit.

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The Month in Washington

• **From the Washington Office of the American Medical Association.**

THE only two crucial health bills that had an outside chance of passage in the 93rd Congress faced tough sledding in the remaining "lame duck" days, mostly due to the wide differences between the House and Senate versions.

The House Commerce Committee has approved and sent to the floor for action an Aid-For-Medical Education bill requiring medical school graduates to pay back the federal government for its contribution to their education through capitation assistance or serve in shortage areas.

Another provision of the House Committee bill establishes an agency for accrediting medical residency training programs and for limiting the number of positions in each program. The total would equal 125 per cent of the estimated number of graduates from U. S. medical schools, thus imposing a ceiling on the number of slots that could be filled by foreign medical graduates. Some 7,000 residencies could be eliminated if this limitation were imposed now.

The Senate has approved a manpower bill much broader in overall scope than that of the House but the Administration, the American Medical Association, and the Association of American Medical Colleges vigorously oppose both bills. As a result of this controversy and the shortage of time remaining, both health manpower bills could be dead for 1974.

A one-year extension of present aid programs is the alternative. The AMA and others support this latter course.

Health planning bills are also pending in the Senate and House. Both bills have been substantially modified from the original versions which called for a tough regulatory structure for the health sector similar to sanctions which now govern the operations of public utilities.

The arguments of the AMA and other groups have prevailed and a rate setting provision has been struck from the House bill. However, the Senate bill still contains authority for government regulation of hospital rates.

The AMA opposes the Senate bill because:

— The bill represents a mechanism for the regulation of the health care delivery system.

— Control of the planning and regulation process would not be at the local level, but would be directed from HEW.

— Health care would be subject to public utility type regulation.

— "There is no proven basis for adopting this extreme system of controls," the AMA asserts.

— State legislatures would be required to adopt certificate of need legislation to implement state programs of control meeting the satisfaction of the HEW Secretary.

— States would be expected to establish rates for all health services, which through regulation, could cover all institutional and ambulatory services, including professional charges. HEW is empowered to establish criteria respecting basic elements of the rate structures.

— Control of the health sector would be federalized through the broad authority vesting such power in HEW.

— The complicated planning program proposed in the bill "could delay health resource development and adversely affect health services," according to the AMA.

Similar but less strenuous objections were raised by AMA against the more moderate planning bill approved by the House Commerce Committee. "While the bill does not contain the original public utility type controls proposed, which included rate setting authority in the states, the bill does establish a controlled planning system embracing characteristics of a public utility type approach to the regulation of health services and facilities," according to the AMA.

"The bill should be rejected and the existing authorities for Comprehensive Health Planning and Regional Programs should be extended until an appropriate alternative is developed," the AMA argues.

The great difference between the House and Senate versions of both the planning and manpower bills, the opposition of almost all provider groups, plus the time bind would seem to reduce greatly the passage of either bill in 1974.

NIH Legislation

President Ford has indicated that the national health insurance plan he will submit to the next Congress will be similar to former President Nixon's Comprehensive Health Insurance Plan (CHIP) which was based on mandatory coverage of workers by employers through the existing private health insurance system. In a legislative message to the "lame-duck" Congress, Ford made no pitch for action in the present Congress.

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Obituaries

JAMES M. DE PUE, M. D.

Dr. James M. De Pue of Spencer died on November 16 in a Charleston hospital. He was 75. A native of Spencer, Doctor De Pue was a family physician and general surgeon. He had operated the De Pue Hospital in Spencer since 1934.

Doctor De Pue was a graduate of West Virginia University and received his M. D. degree in 1933 from Rush Medical College. He was a veteran of World War I. He was a member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association and the American Medical Association.

Surviving are a son, J. M. De Pue, Jr. of Mountain View, California; a daughter, Mrs. Nancy Kefauver of Vista, California; and a stepson, Mike Webb of Spencer.

O. L. HUDKINS, M. D.

Dr. O. L. Hudkins, a retired Weston physician, died on October 24 in a hospital there following a lingering illness. He was 92. A native of Chapel (Braxton County), Doctor Hudkins received his M. D. degree in 1908 from the University of Louisville School of Medicine. He practiced at Flatwoods and in Iowa before moving to Weston in 1923.

Doctor Hudkins was an honorary member and a Past Secretary and Treasurer of the Central West Virginia Medical Society, and an honorary member of the West Virginia State Medical Association and the American Medical Association.

Surviving are two sisters, Miss Lucille Hudkins of Lexington, Kentucky and Mrs. Nina Knight of Miami, Florida.

DWIGHT M. HOKE, M. D.

Dr. Dwight M. Hoke of Beckley died on November 25 in a hospital there. He was 78. A family physician, Doctor Hoke was a graduate of West Virginia University and received his M. D. degree in 1927 from the University of Maryland School of Medicine.

Doctor Hoke was a native of Second Creek (Monroe County). He was a veteran of World War I.

Survivors include two brothers, Connie D. Hoke of White Sulphur Springs and Wallace T. Hoke of Lewisburg; and one sister, Mrs. Virginia A. Martin of White Sulphur Springs.

Government Survey Started On Lead-Based Poisoning

The National Bureau of Standards, Commerce Department, has begun an experimental survey to determine the nature and extent of lead-based poisoning in 4,000 Pittsburgh homes. This is the first large search for lead paint hazards.

PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

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Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

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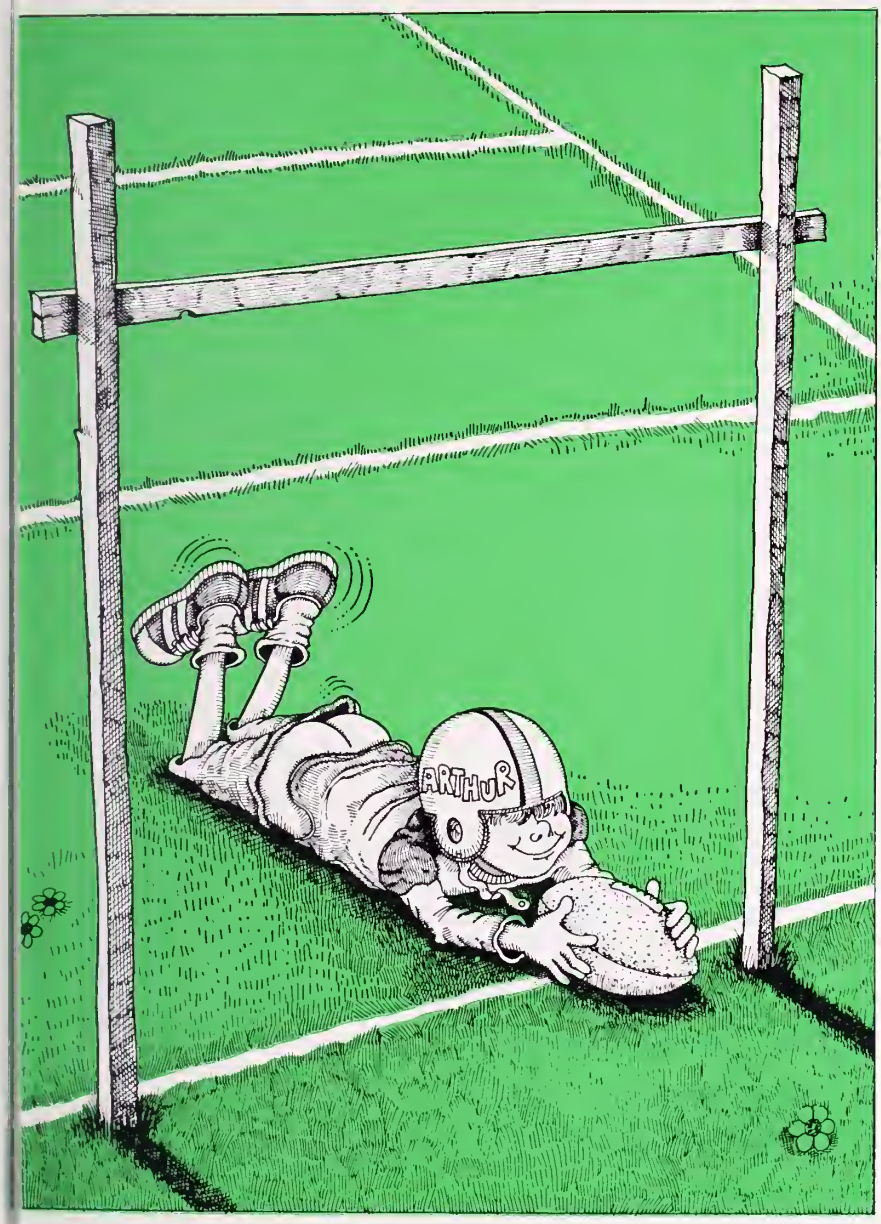

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County Societies

MERCER

The Mercer County Medical Society met on November 20 in Bluefield at the University Club. Three physicians from the West Virginia University School of Medicine were guest speakers—Dean John E. Jones, Assistant Dean David Z. Morgan, Dr. Clark K. Sleeth, Professor of Medicine and former Dean; and Dr. Hartwell G. Thompson, Dean of the Charleston Division. Doctors Jones, Thompson and Sleeth discussed the Family Practice residency program at WVU, the university's "Out-Reach" Program for medical students in the Charleston Area Health Education Center, and Area Health Education Centers in general.

Doctor Morgan discussed the admissions policy at WVU.

The following officers of the Society were elected for 1975:

Drs. James P. Thomas, President; Edward M. Spencer, Vice President; John J. Mahood, Secretary-Treasurer; and Frank J. Holroyd, Executive Committee.

Elected Delegates to the Annual Meeting of the State Medical Association were Doctors Holroyd, Upshur Higginbotham, L. J. Pace and Sam Milchin.

The Society approved a motion to endorse the action of the State Medical Licensing Board regarding the regulation of Physician Assistants.—John J. Mahood, M. D., Secretary.

CABELL

The Cabell County Medical Society met on November 14 in Huntington at the Gateway Inn. The guest speaker, Dr. Andrew Welden, gave an interesting talk on "Antibiotic Distribution in the Healthy and Diseased Kidneys."

Dr. Edwin J. Humphrey, III, President, called attention to the recent announcement by the Loyola University Stritch School of Medicine in Chicago that Dr. Albert C. Esposito, Huntington ophthalmologist, was to be awarded the Stritch Medal for outstanding achievement in his field.—Charles H. McKown, Jr., M. D., Secretary.

McDOWELL

The McDowell County Medical Society held a joint meeting with its Auxiliary on November 13 in Welch at the Ember Glo Restaurant. Honor guests were Dr. William E. Gilmore, President of the West Virginia State Medical Association, and Mrs. Gilmore; and Mrs. William T. Lawson, President of the State Auxiliary, and Doctor Lawson. Doctor Gilmore spoke to both groups on "Emergency Medical Care in West Virginia."

Using slides, he presented a picture of emergency medical care in 11 various areas of West Virginia, pointing out that emergency medical care in rural areas had a much higher fatality rate than that in urban areas. Doctor Gilmore hopes to interest local groups in upgrading emergency medical care in their areas.

Mrs. Lawson then presided at a separate meeting of the Auxiliary.

The Society voted to oppose both the then proposed AMA dues increase and the discontinuance of advertising from AMA publications.

New Society officers elected were Drs. Romulo Miranda, President; Joseph C. Ray, Vice President; and Arthur A. Carr, Secretary.

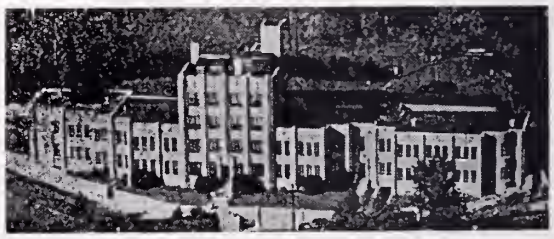
The Society expressed a unanimous opinion that the need was great in McDowell County for ophthalmologists and otolaryngologists. The opinion was in response to an inquiry by Dr. J. Elliott Blaydes, Jr., Secretary-Treasurer of the West Virginia Academy of Ophthalmology and Otolaryngology—Arthur A. Carr, M. D., Secretary.

MONONGALIA

The Monongalia Medical Society met on November 5 in Morgantown at the Old Mill Club. The scientific session was presented by Dr. Nathaniel F. Rodman, Chairman of the Department of Pathology at the West Virginia University School of Medicine. Doctor Rodman discussed the organization of the surgical department at WVU and his research in the cellular pathology of platelets.

The Society approved a motion expressing a general consensus of approval for proposed legislation establishing a State medical practice liability board modeled after the Workmen's Compensation Commission.—H. Summers Harrison, M. D., Secretary.

Dentistry:
Glenn B. Poling, D. D. S.



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Book Reviews

GENERAL OPHTHALMOLOGY—By Vaughan and Asbury. Lange Medical Publications, Los Altos, California 94022. Price $9.50

The seventh revised edition of this world-renowned work has been added to and brought up-to-date and its price kept again very minimal. Throughout the text, it appears that the words used have been cut to the minimal and yet the explanations are superb. It is no wonder that this book has been translated into many foreign languages. The use of consultants in many of the chapters adds authoritatively to the text and makes it of particular use to its reader.

Its chapters on anatomy with its accurate illustrations; embryology, stage by stage to senescence; the examination with symptoms and then techniques with special examinations included are concise and to the point and illustrated where it is deemed necessary.

Chapters are included on Management of Common Ocular Disorders which is well done and the treatment is discussed generally with antibiotics and common pitfalls. The lids and lacrimal apparatus, the cornea and sclora; and the retina are completely rewritten and excellent with up-to-date discussion on retinal pathology and diseases with suggested therapy. The lens and the vitreous are also rewritten to portray the latest in vitreous pathology and surgery. The chapter on Neuro-ophthalmology in itself is worth the price of the book, and the chapter on strabismus and its details will be of particular interest to the pediatrician and the young ophthalmologist. Glaucoma is discussed in detail and covers very well the surgical treatment and pitfalls. Tumors, trauma, and disorders associated with systemic disease is again a short encyclopedia of this entity and very good. Also covered are generics, refractions, and a special chapter of pediatric interest which is highly recommended.

In the appendix, the ophthalmoloscopic examination is covered in detail and illustrated quite well. The commonly used eye medications are covered briefly and to make the book even more valuable, there is a chapter on visual standards with industrial visual loss percentages calculated. Also rehabilitation service for the visually handicapped and a vocabulary of terms related to the eye are included.

The diagrams and pictures used in the illustrations are to the point, but in many of the pathological findings, these would have been excellent — if only in full color.

The book covers the field exceptionally well for medical students, interns, residents, general practitioners, pediatricians and other specialists interested in obtaining the answer to many facets in the field of ophthalmology. In this view, it is then — heartily and highly recommended to the profession.—Albert C. Esposito, M.D.

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Breast self-examination:

KEY ROLE OF THE PHYSICIAN

item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

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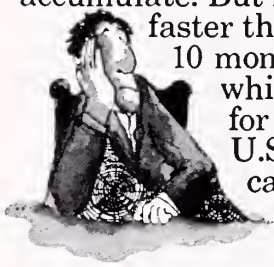

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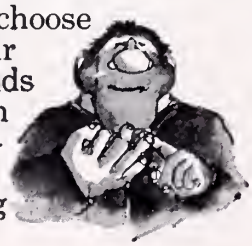

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ecautions:

RAL: In the elderly and debilitated and in dren over six, limit to smallest effective ige (initially 10 mg or less per day) to lude ataxia or oversedation, increasing ually as needed and tolerated. Not recom- ded in children under six.

JECTABLE: Keep patients under observa- , preferably in bed, up to three hours after al injection; forbid ambulatory patients to ate vehicle following injection; do not inister to patients in shock or comatose es; use reduced dosage (usually 25 to 50 for the elderly or debilitated and for dren age twelve or older.

RAL AND INJECTABLE: Though generally recommended, if combination therapy other psychotropics seems indicated, fully consider individual pharmacologic cts, particularly in use of potentiating pounds such as MAO inhibitors and nothiazines. Observe usual precautions in ence of impaired renal or hepatic func- Paradoxical reactions (e.g., excitement, ulation and acute rage) have been rted in psychiatric patients and hyper- e aggressive children. Employ usual

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Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral: Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

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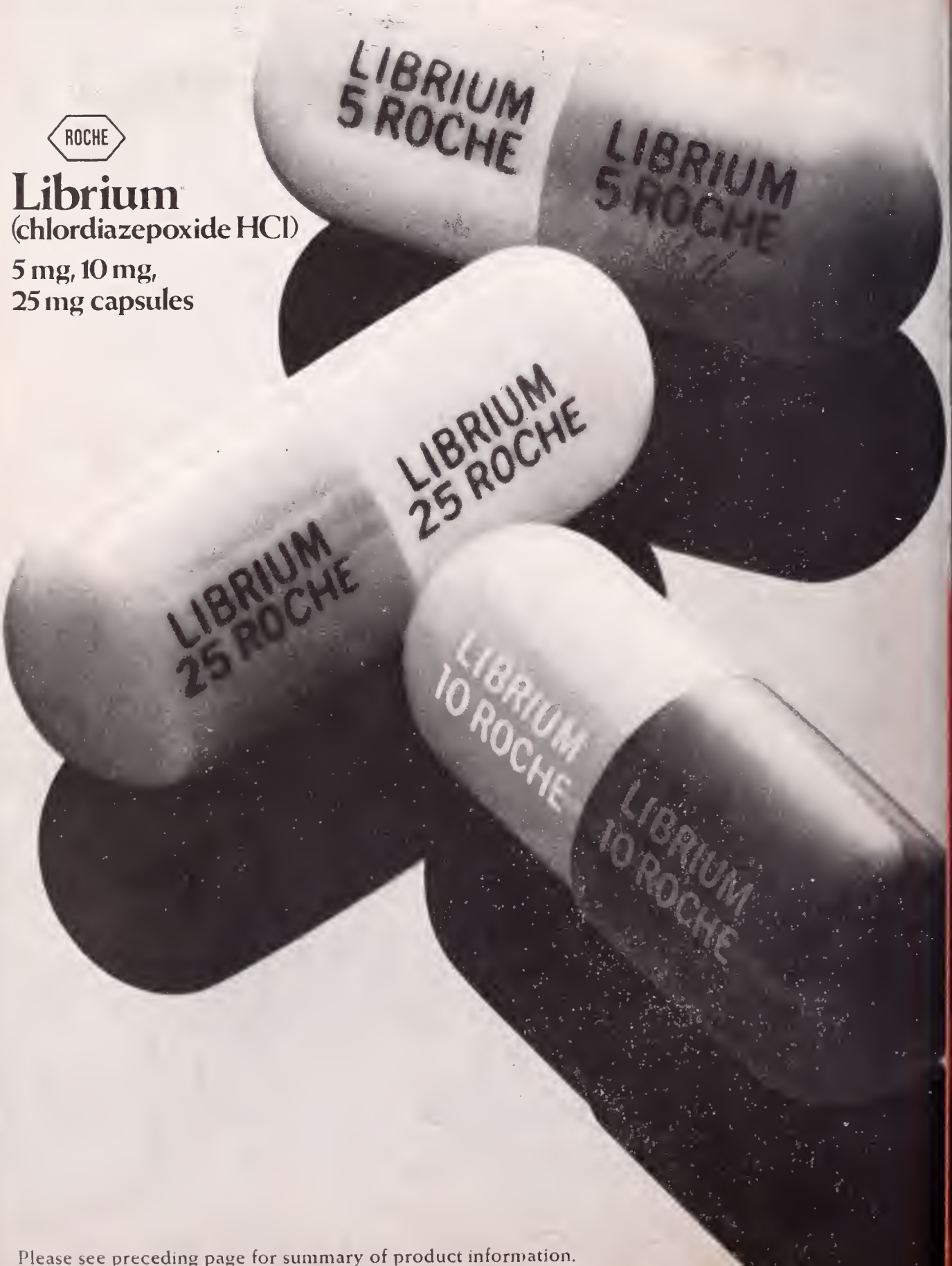

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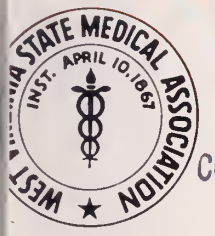

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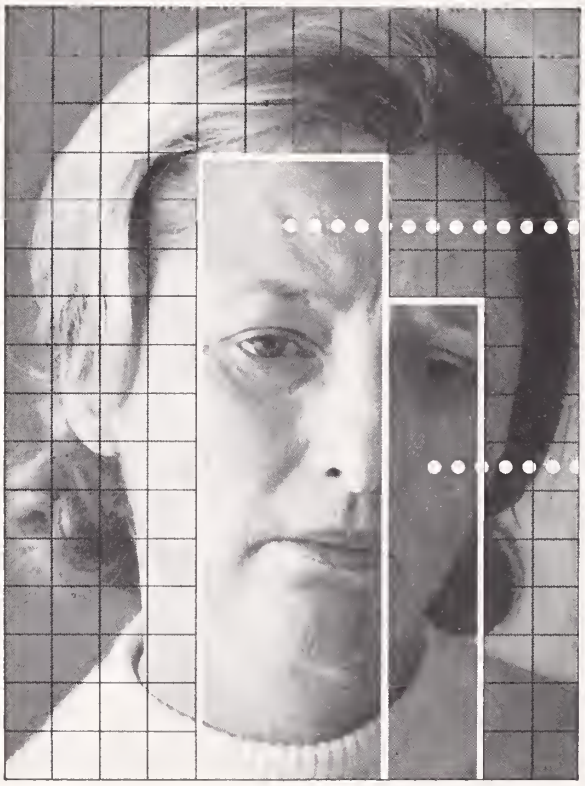

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in and/or severity of grand mal sei require increased dosage of star convulsant medication; abrupt w may be associated with tempora crease in frequency and/or seve seizures. Advise against simultai gestion of alcohol and other CNS sants. Withdrawal symptoms (si those with barbiturates and alcol occurred following abrupt discor (convulsions, tremor, abdominal cle cramps, vomiting and sweati addiction-prone indlviduals unde

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in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

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(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

e because of their predisposi-
tuation and dependence. In
lactation or women of child-
, weigh potential benefit
sible hazard.
s: If combined with other psy-
or anticonvulsants, consider
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gs such as phenothiazines,
arbiturates, MAO inhibitors
ntidepressants may potentiate
Usual precautions indicated in
verely depressed, or with latent
or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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FEBRUARY
1975

Vol. 71 No. 2

The
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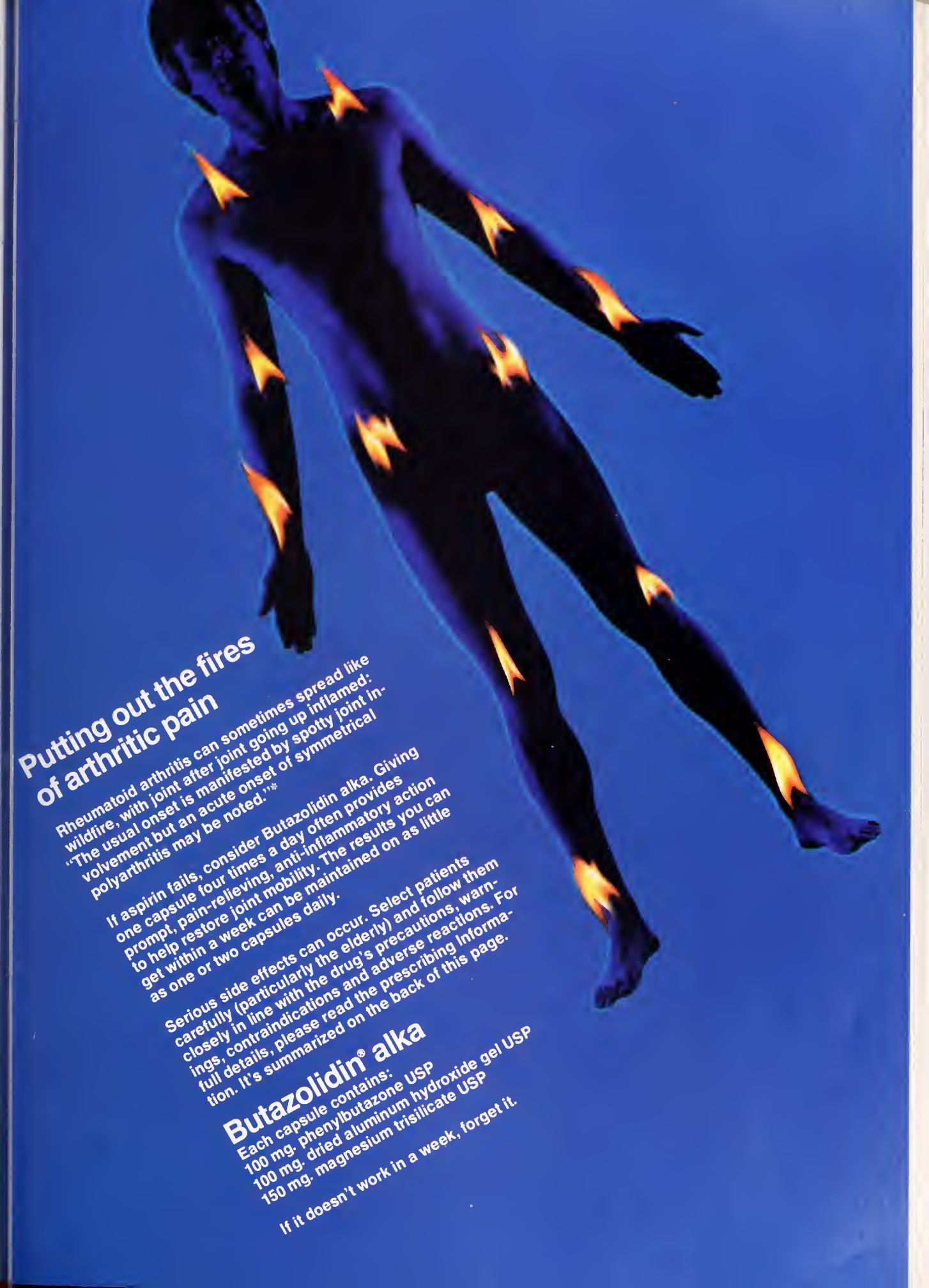
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Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*
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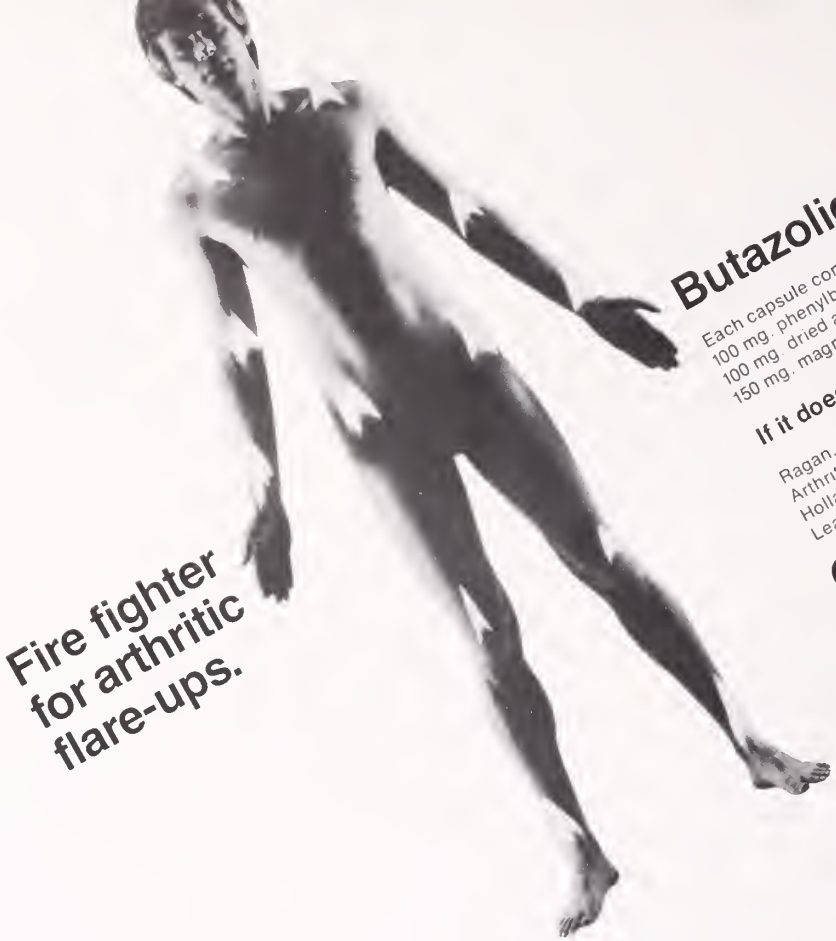

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Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

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Indications Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.
Contraindications Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.
Warnings Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.
Precautions: The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.
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CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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W. Shakespeare

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Warnings: Not for use in children under three years of age. Should not be administered repeatedly to patients with pulmonary, cardiac, renal, or hepatic disease.

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Blood: Cyanosis, methemoglobinemia, sulfhemoglobinemia, and hemolytic anemia; neutropenia, leukopenia, and pancytopenia.

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Other: Hypoglycemia, CNS stimulation, jaundice.

Dosage and Administration: Children 3 to 6 years of age: One 2 gr suppository rectally 3 or 4 times daily; not to exceed 8 grains per day.

Children 6 to 12 years of age: One 5 gr suppository rectally 3 or 4 times daily; not to exceed 20 grains per day.

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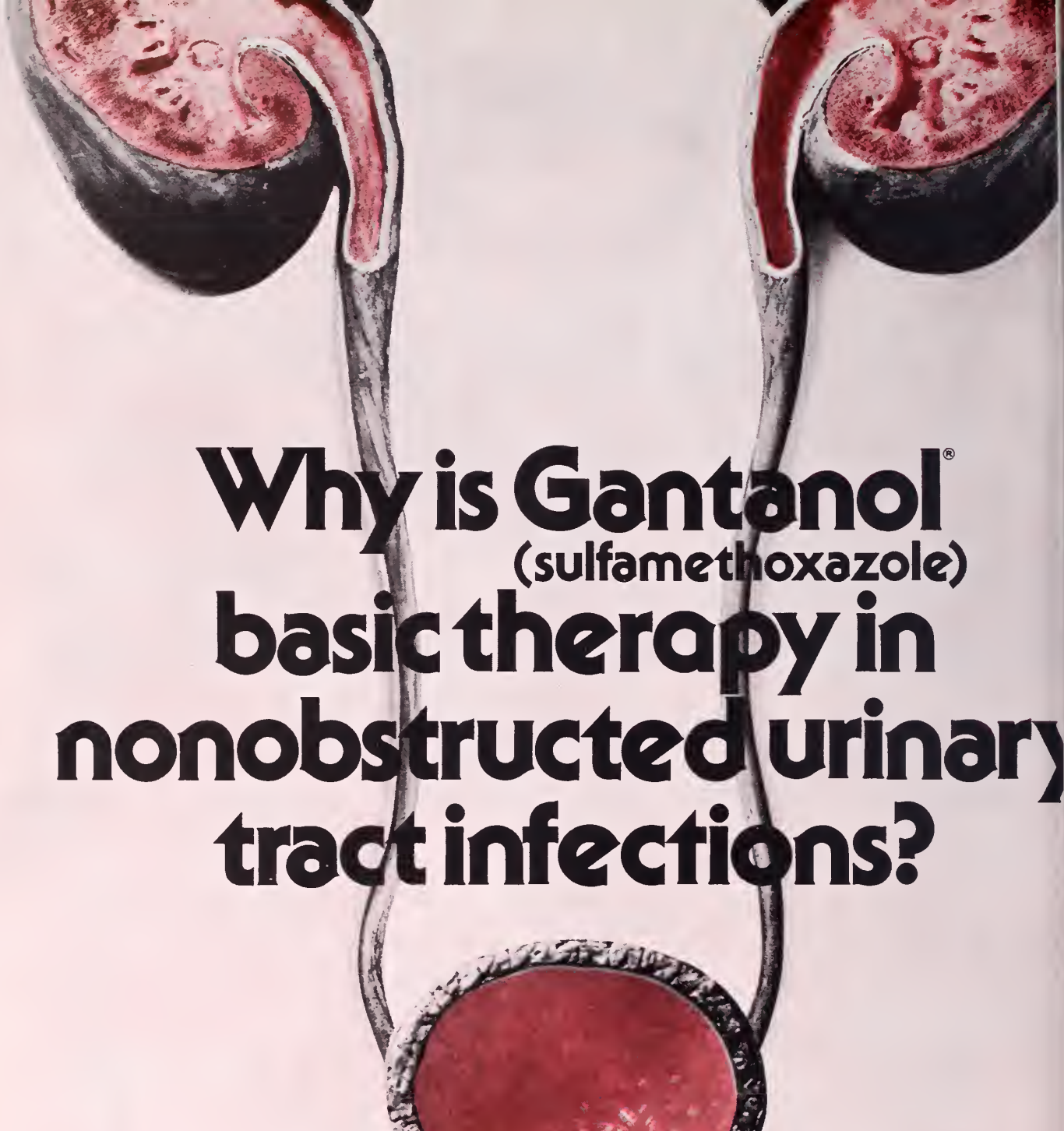

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Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

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Precautions: Use cautiously in patients with impaired rena hepatic function, severe allergy, bronchial asthma; in glucose phosphate dehydrogenase-deficient individuals in whom dc related hemolysis may occur. Maintain adequate fluid intake prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, apl tic anemia, thrombocytopenia, leukopenia, hemolytic anemia, p

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Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

a, hypoprothrombinemia and methemoglobinemia); *allergic ctions* (erythema multiforme, skin eruptions, epidermal necroly- urticaria, serum sickness, pruritus, exfoliative dermatitis, ana- lactoid reactions, periorbital edema, conjunctival and scleral ction, photosensitization, arthralgia and allergic myocarditis); *trointestinal reactions* (nausea, emesis, abdominal pains, hepa- , diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* adache, peripheral neuritis, mental depression, convulsions, ia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous ctions* (drug fever, chills, toxic nephrosis with oliguria and ria, periarteritis nodosa and L.E. phenomenon). Due to certain mical similarities with some goitrogens, diuretics (acetazola- e, thiazides) and oral hypoglycemic agents, sulfonamides have sed rare instances of goiter production, diuresis and hypogly- nia as well as thyroid malignancies in rats following long-term inistration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

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If you don't like thinking about safety,
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Wherever it hurts, Empirin Compound with Codeine usually provides the symptomatic relief needed.

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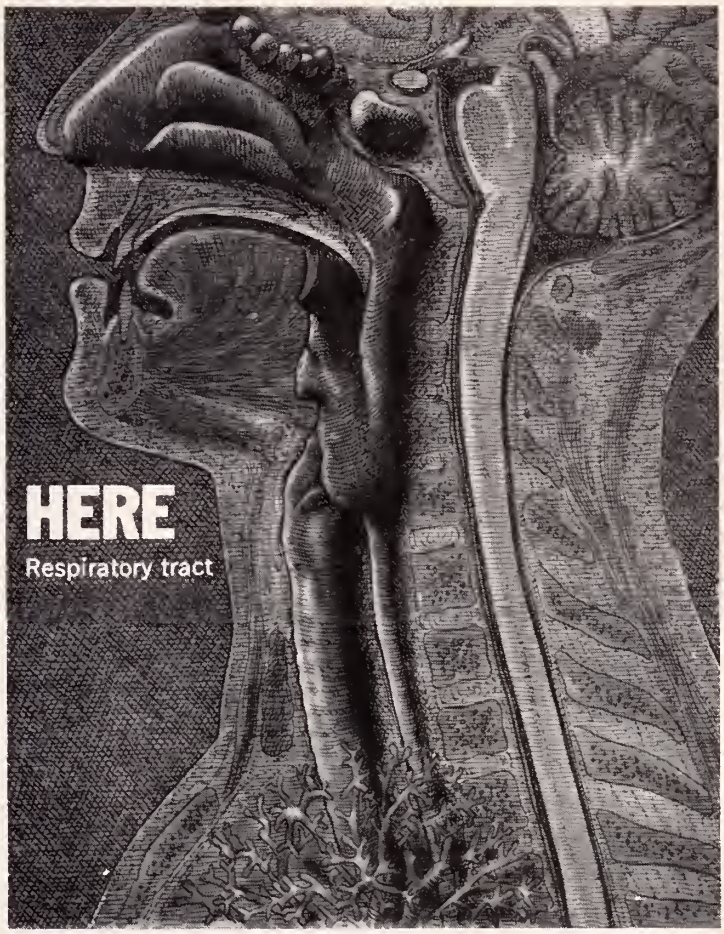

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The Role of the Detail Man

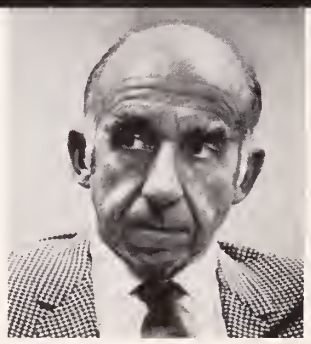
Opinion & Dialogue

Dr. Willard Gobbell
Family Physician
Encino, California

"I may be prejudiced, but I an very much in favor of the detail me I meet. Most of them are knowledge able about the drugs they promote and can be a great help in acquaint ing me with new medication."

Family Physician's Perception

I think that most general practitioners in this area feel as I do about the detail man. Over the years I have gotten to know most of the men who visit me regularly and they in turn have become aware of my particular interests and the nature of my practice. They, therefore, limit their discussion as much as possible to the areas of interest to me. Since I usually see the same representative again in future visits, it is in his best interest to supply me with the most honest, factual, as well as up-to-date information about his products.



Dr. Jeremiah Stamler
Chairman
Department of Community Health and Preventive Medicine, and Dingman Professor of Cardiology
Northwestern University Medical School

"In the total picture of dealing with health problems in this countr there is a potential for detail men to play a meaningful role."

The Positive Influence

My contact with representatives and salesmen of the pharmaceutical industry is the type of contact that people in a medical center research people, and academic people have and that's in all likeliho on a somewhat different level from that of the practicing physician.

Let me touch on how I personally perceive the role of the sales representative. These men reach large numbers of health professionals. Thus they could be—and at times actually are—disseminators of useful information. They could consistently serve a real educational function in their ability to discuss their products.

At present they do distribute printed material, brochures and pamphlets—some of it scientifically sound and therefore truly useful—as well as some excellent films produced by the pharmaceutical industry. When they function in this

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

---

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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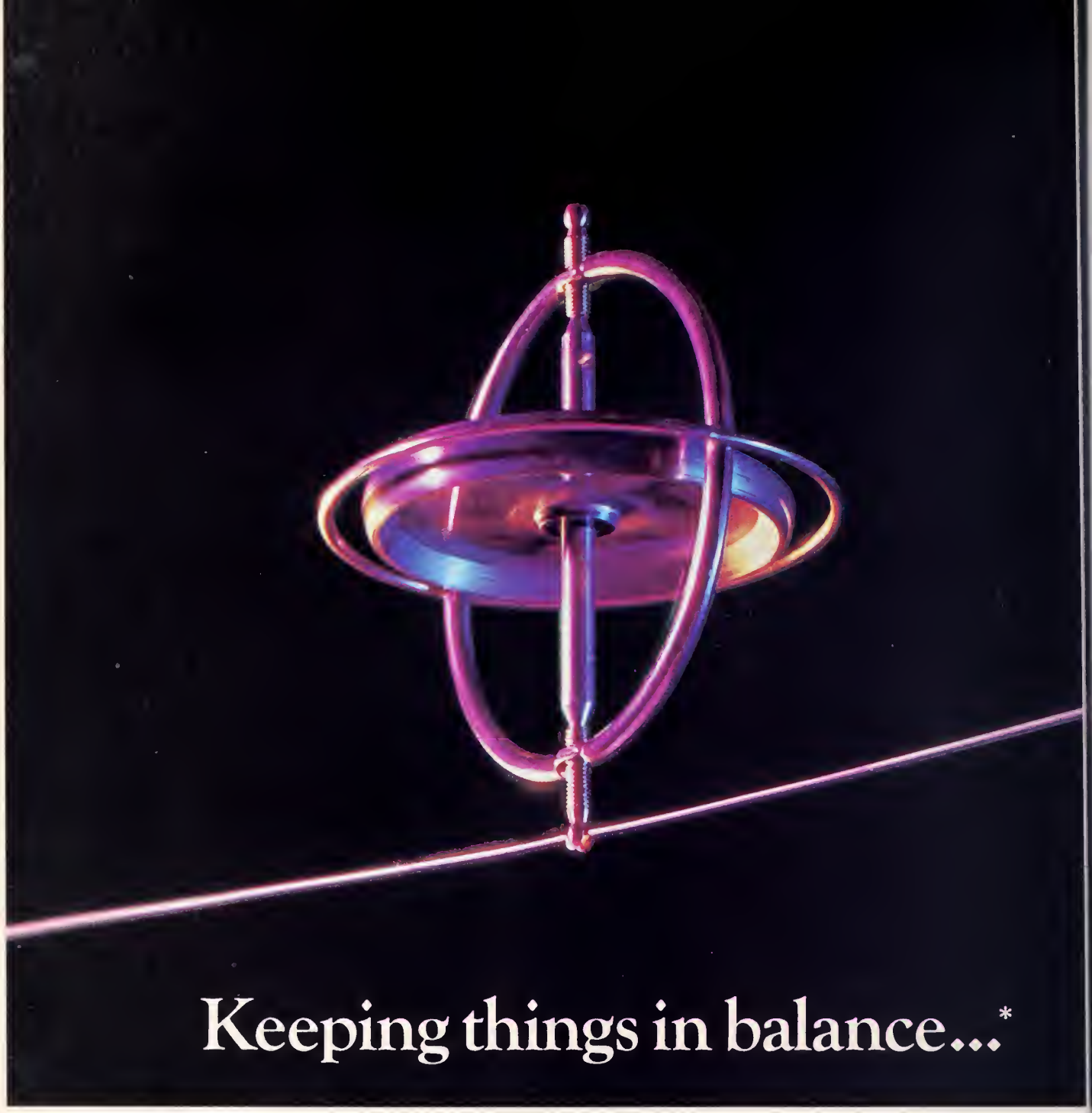
P·M·A



Antivert®/25 Tablets
(25 mg. meclizine HCl)

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows.

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS: Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS: Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS: Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

The West Virginia Medical Journal

Vol. 71, No. 2 February, 1975

Juvenile Rheumatoid Arthritis

(Retrospective Study Of Thirty Cases At West Virginia University Medical Center)

Chitraleka Ramanan, M.D.; and George Khoury, M.D.

Rheumatoid arthritis, a common disease in adults, is relatively uncommon in children. The capricious course and the broad clinical spectrum of this disease usually pose diagnostic problems. In this report, we will describe our experience with 30 juvenile rheumatoid arthritis (JRA) patients admitted to the West Virginia University Medical Center. Emphasis will be placed on the clinical presentation, therapeutic management and the course of the disease.

Case Studies

In this retrospective study, the charts of 30 patients, ranging in age from two to fourteen years, with JRA were reviewed. The clinical presentation of the 15 girls and 15 boys is summarized in Table 1. Twenty-two patients presented with polyarticular arthritis of three months to five years duration (70 per cent). Six patients had pauciarticular type of arthritis (20 per cent), and three had systemic manifestations consisting of high spiking fever and listlessness (10 per cent).

Symptomatology includes 24 of these patients having had fever at one time or another during the course of chronic arthritis with high and spiking fever in the acute stage of the disease. Two patients had pericarditis; however, iridocyclitis was not evident in this group of patients.

The laboratory findings are summarized in Table 2. The tests performed were complete blood count, sedimentation rate, rheumatoid factor and antinuclear antibodies. As the table illustrates, twenty-two patients had a sedimentation rate of more than 30 mm./hour; thirteen patients had anemia with an average value of hemoglobin of 11 gms. per cent; and twelve patients had more than 12,000/cubic mm. of white cells. Positive rheumatoid factor was present in two patients, but antinuclear antibodies were absent in all.

The Authors:

- **Chitraleka Ramanan, M.D., and George Khoury, M.D., Department of Pediatrics, West Virginia University School of Medicine.**

Treatment

Aspirin, 80 to 100 mgm./kg./day, was prescribed initially in all patients (Table 3). Seventeen patients were placed on steroids, mainly on a short term basis, when their symptoms did not respond to aspirin. Of these patients six were continued on small doses of steroids; twelve were placed on gold therapy; and all were advised to participate in physiotherapy. Three patients underwent synovectomy of either the ankle or knee joint.

Follow-up

Fifteen patients are being followed up in the pediatric out-patient department of the West Virginia University Medical Center and the remainder are being followed up by their personal physicians. Two patients died: one, of pneumonia and the other, of severe pericarditis. The patients presently being followed up, excluding the eight that were lost for follow-up and the five placed on gold therapy, are symptomatically clear except during times of exacerbations which usually occur about once a year.

TABLE 1

Presentation and Symptoms

Data	No. of Patients	Percentage
Polyarticular	22	70
Pauciarticular	6	20
Systemic	3	10
Fever	24	80
Rash	8	26
Pericarditis	2	6
Iridocyclitis	0	0

TABLE 2

Investigations

Data	No. of Patients	Percentage
Negative ANA	30	100
Negative RA	28	93
↑ Sed rate >30 mm	22	70
Anemia	13	46
>WBC 12,000/cm.	12	40

TABLE 3

Therapy and Follow-up

Data	No. of Patients	Percentage
Physiotherapy	30	100
A.S.A.	30	100
Steroids	17	56
Orthopedic Care	9	30
Gold	4	13
Follow-up in last 2 years	15	50
Lost for follow-up	8	26
No symptoms	4	13
Death	2	6

During this time, either their dosages of aspirin and/or of steroids have been increased for a short period of time resulting in the patients' experiencing greater relief. Those on gold therapy are definitely undergoing a lesser number of exacerbations.

Diversified Clinical Picture

To appreciate the diversified clinical picture of juvenile rheumatoid arthritis we will present four patients, each with a different manifestation.

Case One: R. C., an eight-year-old boy, was referred at the age of four with a seven-month history of swelling of both the wrists with recurrent attacks of pain and stiffness of fingers, occurring primarily in the morning. On examination, the fingers were tapered and there was a limitation of flexion and extension of the wrist joints, elbows, and knees (with synovial thickening). A diagnosis of polyarticular type of JRA was made. After the patient was placed on aspirin and entered a program of physiotherapy, a marked improvement of symptoms was noted. One month later he developed a recurrence of arthritis in addition to loss of appetite and listlessness. The hemoglobin was 10.3 gms.; the sed rate was 31 mm. per hour; and the rheumatoid factor was negative. At this time he was started on a short-term steroid course starting with prednisone 20 mgm. per day which was tapered to a dose of 5 mgm. on alternate days, and finally discontinued. Aspirin was continued, but two weeks later he suffered exacerbation of symptoms. At this point, gold therapy was initiated and recurrence of his exacerbations has been prevented. Presently, the patient is doing well.

Case Two: J. B., an eleven-year-old girl, was admitted with a three-week history of rash, joint pain, enlarged glands, headache, lethargy and intermittent spiking fever. Examination revealed a very ill-looking child with the following symptoms: an intermittent type of high temperature (Figure 1); a faint transient, salmon-colored rash extending from the hands and over the trunk, and appearing with each occurrence of fever; enlargement of cervical lymph nodes; swelling of the left ankle with thickening of the synovial membranes and limitation of movement; and, lastly, there was fusiform swelling of the fingers.

Clinically, a diagnosis of acute febrile type of JRA was made. The laboratory findings included a negative antinuclear antibody and rheumatoid factor, and a sed rate of 110 mm. per hour. The mono spot test was negative, with the albumin globulin ratio reversed. She was placed on ASA, 90 mgm./kg./day in divided doses and then increased to 120 mgm./kg./day in divided doses with no response noted. She was, therefore, started on prednisone, 60 mgm./m^2/day in divided doses, and there was immediate response. The temperature became normal and, with the continuation of prednisone and aspirin, the patient did remarkably well. The prednisone was gradually tapered off over a period of three months. During her last visit to the out-patient clinic, she was well, asymptomatic, off steroids and aspirin, and was found to have a normal sed rate.

Case Three: J. P., a six-year-old boy, was referred with a six-month history of swelling and pain of the left ankle, preceded by sore throat and fever. A diagnosis of rheumatic fever was initially suspected; however, upon examination here he was found to be afebrile. The patient demonstrated an inability to walk due to swelling and tenderness of the left ankle with definite limitation of movement. Laboratory findings included a throat culture that grew

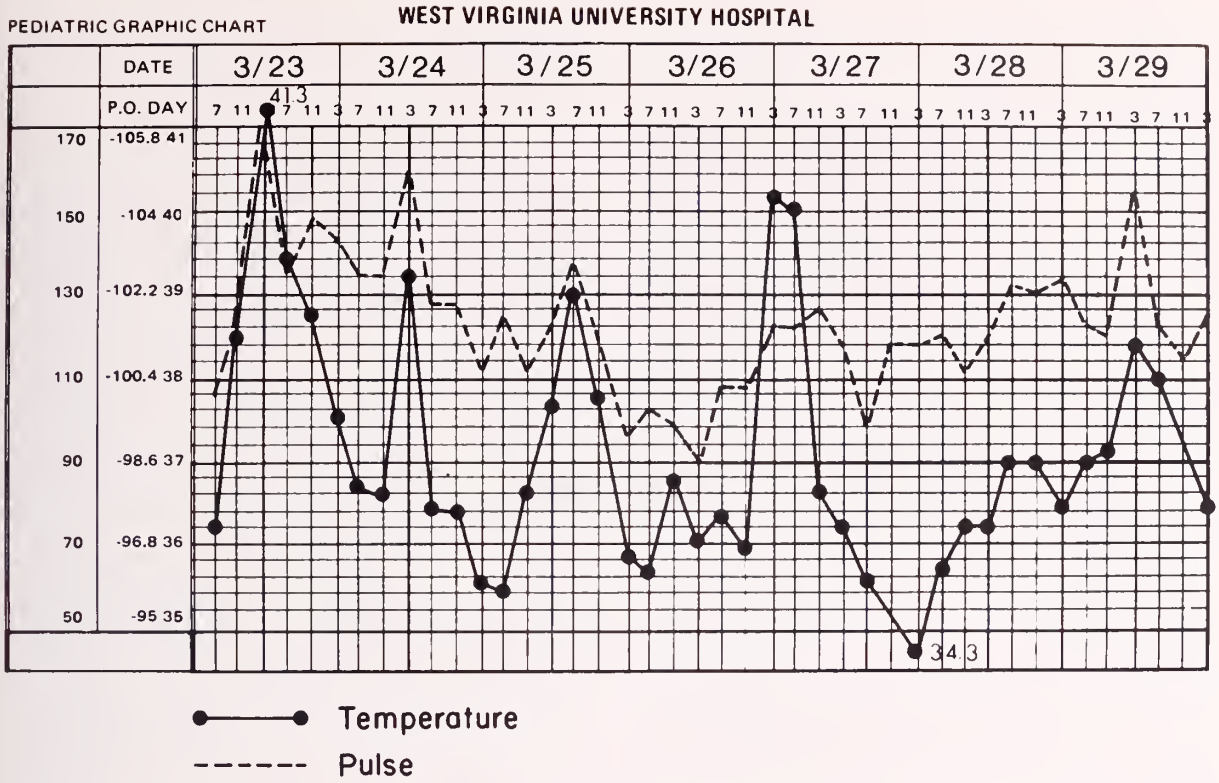


Figure 1. Temperature chart in systemic variety of JRA. The high spiking temperature coming down to normal once or twice a day is characteristic. Note the dramatic response to steroids.

group A beta hemalytic streptococci, negative LE prep and a hemoglobin of 12.1 gms. Sed rate was 25 mm. per hour and CRP was negative. Febrile agglutination studies were normal. The roentgenogram of the ankle showed soft tissue swelling and demineralization of the talus and calcaneus, and the metatarsals, compatible with monoarticular type of JRA.

Moderate improvement was noted when 1,500 mgm. per day of aspirin was prescribed in divided doses; however, pain and limitation of movement of his left ankle continued. Corrective shoes were needed after a year and intermittent placement on prednisone during exacerbations was necessary. Orthopedic consultation was obtained and triple arthrodesis was

Figure 2. Osteoporosis in chronic polyarticular type of JRA.

advised but the patient's parents refused their consent to surgery.

Case Four: G. M., a nine-year-old girl, known to have polyarticular type of JRA of five years duration, was admitted to WVU Hospital with a history of fever, abdominal pain, vomiting and diarrhea of one day's duration. On examination, she was obtunded; her blood pressure was 80/40 mm. of Hg.; her pulse rate was 140/min.; she had fusiform swelling of all fingers; and the muscle mass of all extremities was atrophic. No heart murmur was heard. A generalized tenderness of the abdomen was evident. Laboratory findings included an elevated white blood cell count and elevated sed rate. Chest x-ray showed a normal heart size but the vascular markings appeared to be increased. Bone x-ray survey revealed generalized osteoporosis (Figure 2).

She was started on IV fluids and antibiotics, and exploratory laparotomy was undertaken. Generalized mesenteric adenitis was discovered. In the immediate post-operative period the patient suddenly became cyanotic, shocky and died.

At the autopsy, the heart showed severe fibrinous pericarditis with approximately 150 cc. of fluid in the pericardial sac. Prominent, generalized lymphoid hyperplasia with hemorrhage in the right adrenal medulla was found.

Discussion

Juvenile rheumatoid arthritis, also known as Still's Disease, is a collagen disorder with different clinical manifestations. The condition was first described by G. F. Still in 1897.[1] The basic pathophysiology is thought to be an autoimmune reaction between the synoveal membrane and an unidentified antigen. It has been postulated, however, that a virus or a mycoplasma or possible lysozome inefficiency could have caused this disease. The mode of inheritance has not been determined.[2]

The diagnosis of JRA is entirely based on a clinical profile. The diagnostic criteria previously described in the literature [3,14,17] include the following: (1) Onset before the age of 15 years. (2) Poly, pauci, or monoarticular arthritis lasting from three months to six months or longer. (3) Polyarthritis of less than six months duration if it is accompanied by one of the following: rash, positive RA test, iridocyclitis, cervical spine involvement, pericarditis, tenosynovitis, and intermittent fever with marked diurnal variation or morning stiffness. (4) Exclusion of other diseases associated with arthritis such as systemic lupus erythematosus, polyarteritis, tuberculosis, angiitis, leukemia, rheumatic fever, sepsis, syphilis and rubella.

Additional commonly known observations include: leukocytosis, anemia, increased C-reactive protein, subcutaneous nodules, early x-ray changes with osteoporosis, soft tissue swelling and periosteal newbone formation, iridocyclitis and reversal of albumin globulin ratio. Bluestone, Goldberg, et. al., believe that more specific manifestations and greater functional disability might lead to serological abnormalities.

The clinical picture is divided into three main patterns as presented in our study. There are two peak age incidences, one to four years, and nine to fourteen years. The commonest manifestation is polyarticular type of JRA which starts usually in early childhood. The pauciarticular (five or less joints) and the systemic variety are rarer. Involvement of one joint alone could occur rarely. In medical literature, polyarticular and pauciarticular varieties are almost equally seen. In our study, however, the percentage of polyarticular variety greatly exceeds the percentage of other types. The fact that in our study the sex distribution is equal is also an uncommon presentation, when compared with other medical literature where there is always presented a predominence of girls. [1, 2, 3, 4, 5, 6, 7] The reported incidence of positive rheumatoid factor varies between 15 to 20 per cent, in contrast to the 80 per cent incidence in adults with rheumatoid arthritis.

Iridocyclitis is a rare serious complication which should be ruled out by yearly check-up.[3] This is usually found with the pauciarticular type of JRA. It is important to note that very severe eye changes can be seen in a relatively asymptomatic child and many times this could only be diagnosed with a slit lamp examination.[8] Hepatomegaly, (10 per cent), and splenomegaly are described. Pericarditis (10 per cent) could occur in all types of JRA, but in our study only two had this. Generalized lymphadenitis could occur. Morning stiffness is very characteristic of JRA. Rheumatoid rash is evanescent, salmon pink, circumscribed and usually associated with fever and lymphadenopathy. In our study, only eight cases had the rash (26 per cent). Nonspecific abdominal pains can occur in 25 per cent of the cases, but we found this in only one of our patients. In monoarticular type, joint fluid changes and joint biopsy would help the diagnosis.

Management of JRA Patients

In the management of children with JRA one has to keep in mind specific guidelines. (1) There is no specific cure for this disease. (2)

The aim should be to preserve joint function. (3) Drug therapy has to be individualized according to symptoms. (4) Emotional support for the family and the child is of the utmost importance.

Aspirin has been considered the best drug of choice in the initial treatment of JRA. The dose is usually between 90 to 120 mgm./kg./day. One should be alert to the toxic manifestations which could present in the form of lethargy and episodic hyperpnea.[4]

Steroids have dramatically improved the outlook of JRA patients. In severe cases, 60 mgm./m^2 or one to two mgm./kg. would be a good starting dose. Unlike many authors who advise gradual increase of steroid doses, we have found that starting with an adequate dose and tapering it down has proved more effective. When tapering the steroids, we also have found that a very small maintenance dose (5 mgm.) on alternate days, for example, in patients that need maintenance, remarkably keeps them free of symptoms and also free of side effects. The dangers of steroid therapy — growth retardation, cushionoid features, increased infections, high blood pressure and GI ulcers — have to be watched for. It is as wrong to deny the use of steroids as it is to use it over-enthusiastically. In systemic JRA, patients feel remarkably better and fever is controlled rapidly with the initiation of steroids. Intraarticular steroid therapy is used primarily in the monoarticular type of rheumatoid arthritis.

We have found the use of gold very useful in chronic cases with frequent exacerbations. We use as a starting dose 10 mgm. intramuscularly, followed by 25 mgm. intramuscularly, weekly, over a 20-week period. Following this, we administer it bi-monthly and finally, monthly for an indefinite period of time. Careful monitoring of the CBC during this time is essential. Gold has definitely reduced the number of acute exacerbations and the disability.[5]

Physiotherapy is one of the major adjuncts to the therapy of rheumatoid arthritis. Passive and active exercise to all joints is vital, especially since children can usually control their own activity. They are encouraged to behave as normal individuals as much as possible. Swimming, pedaling and playing ball are very good exercises; these and similar exercises should be done at least two or three times a day. Warm, moist air, as in a warm bath, has proved beneficial in alleviating some of the stiffness, swelling, and pain. Rest is of equal importance as these children tire more quickly.

With all the above measures, orthopedic management often becomes necessary. Synovectomy is the commonest form of surgery, especially in the knee and metacarpo phalangeal joints. Nonsurgical orthopedic care includes[7] splinting, bracing, and supporting. Improper use of these would lead to great harm. In advanced cases, osteotomy and arthrodesis become necessary.

The emotional impact of this chronic disease on both the child and his parents deserves special emphasis. Parents need to be advised of the undesirable effects of over-protection on the child's development and maturation. Distortion of the child's image of his or her body could lead to the manifestation of an inferiority complex.

Summary

The clinical course and management of 30 patients with Juvenile Rheumatoid Arthritis have been presented. Seventy per cent of the patients had polyarticular arthritis, 20 per cent had pauciarticular type and 10 per cent presented with systemic manifestations. Treatment consisted of aspirin, steroids, gold salts, and physiotherapy. There was a definite decrease in the incidence of joint exacerbations with gold therapy. Three patients had surgical synovectomies. Emotional support to the patient with JRA and to his family is of paramount importance.

A list of references may be obtained by writing The Journal.

Reconstruction Of Cervical Esophagus With Penile Skin

Romeo Y. Lim, M.D.; and Francisco Ponce, M.D.

Various methods have been developed for the reconstruction of the cervical esophagus following resection for carcinoma. A method, using the penile skin in the repair of the cervical esophagus, was first described by Kaplan and Markowiez, in 1964. This procedure was used in the treatment of a patient with carcinoma of the hypopharynx.

Case Report

The patient, a 78-year-old black male, presented with intermittent dysphagia of one-year duration with associated hemoptysis and pain of the right ear upon swallowing. Direct laryngoscopy and esophagoscopy revealed a cauliflower mass involving the right pyriform sinus with extension into the posterior wall of the hypopharynx and the right arytenoid. There were no palpable neck nodes. The histopathological report was invasive squamous cell carcinoma of moderate malignant index. Laboratory findings: Het. 32, Hgb. 10.5, WBC 9,570. Chest x-ray: normal. EKG: normal. Medical consult: declared a grade III surgical risk.

The patient underwent surgery on June 4, 1970, under deliberate hypotension anesthesia, using Halothane.

Technique of the Operation

Tracheostomy was first performed with the patient intubated and given Halothane and Oxygen. A spiral endotracheal tube was then inserted into the tracheostomy opening and connected to the anesthetic gas machine after the endotracheal tube was withdrawn. A total laryngectomy and resection of the cervical esophagus was carried out. The surgical gap, measuring about 10 cm. between the oropharynx and the remaining esophagus was reconstructed with a full thickness tubular penile skin. The tubular penile skin was inverted with the skin surface forming the lumen of the new esophageal segment. The base of the penile skin was sutured to the oropharyngeal mucosa posteriorly and to the base of the tongue anteriorly, with 4-0 dacron.

A Levine tube was passed through this graft into the stomach to be used for temporary feeding. A No. 40 endotracheal plastic tube was used as an esophageal stent to allow the graft to adhere to its posterior bed. The distal portion of the penile graft was anastomosed to the distal esophagus using 4-0 dacron. A portion of the inferior constrictor muscle was used to cover the distal anastomosis. After the laryngectomy stoma was created, hemovac drains were placed along each side of the newly formed esophagus. The skin incision was closed with 4-0 nylon horizontal mattress sutures. An aeroplast dressing was applied to the incision and a No. 8 laryngectomy tube was inserted into the trachea. A split-thickness skin graft taken from the thigh was used to dress the denuded penis.

The esophageal stent was removed with direct laryngoscopy on the ninth post-operative day. Esophagoscopy revealed good take of the penile skin graft. The patient developed thrombophlebitis of the right leg on the twelfth day after surgery. This was promptly treated with anti-coagulants. On the seventeenth post-operative day a methylene blue swallow showed no leakage. A barium swallow performed 5 days later, however, demonstrated a slight leakage at the distal anastomotic site. The patient was continued on tube feedings and the leakage cleared up in one week. The patient was started on regular diet and was discharged on the twenty-eighth post - operative day. The donor site was well-covered with viable skin. A barium swallow taken eight and one-half months after surgery showed no evidence of stricture with adequate swallowing function. He developed a local recurrence 13 months after surgery and died of pulmonary and bony metastasis two months later.

Discussion

Carcinoma involving the cervical esophagus carries a very poor prognosis. The results of treatment, either by irradiation or surgery, have been disappointing. The diagnosis is seldom made early. From the time it is diagnosed most

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Figure 1. Inverted penile skin graft laid over the pharyngoesophageal defect. (Figure 2). Barium swallow showing the newly formed cervical esophagus.

patients, treated by surgery or radiotherapy, do not live more than one year. Immediate reconstruction of the cervical esophogus, preferably in one stage, should be done when surgical resection is the treatment used.

Methods of reconstruction of the cervical esophagus could be divided into one stage non-delayed and multiple-stage procedures.

One Stage Non-Delayed Procedures

(1) Local cervical flaps: Von Hocker in 1908 and Trotter in 1913 described the use of local cervical flaps in the repair of the cervical esophagus. This was later popularized by Wookey.

(2) Split thickness skin graft: Reidy and Negus utilized a split thickness skin graft wrapped around a portex former to reconstruct the pharynx and cervical esophagus. This method was found to be prone to early stricture and fistula formation.

(3) Laryngeal autograft: this is used only when the carcinoma is confined to the post-cricoid area. The anterior half of both the larynx and upper trachea is preserved. The superior aspect of the larynx is sutured to the pharyngostome and the trachea to the esophagus.

(4) Pharyngogastric anastomosis: Ong and Lee reported three cases in 1960 treated successfully by this method. Free regurgitation of gastric contents was a problem on recumbent and stooping positions.

(5) Colonic transplant: Vulliet of France and Kelling of Germany introduced this method in 1911. Since then, there have been several reports describing the use of either iso- or anti-peristaltic colonic segments.

(6) Revascularized intestial segment: Nakayama of Japan has produced good results with this method.

Multiple Stage Procedures

(1) Thoraco-acromial tube pedicled flap: This involves multiple stage procedures taking months for completion.

(2) Delto-pectoral flap: Bakamjian of Rose-

well Park Cancer Institute developed both a one-stage and two-stage procedure using this chest skin flap. The growth of hair within the lumen of the newly formed cervical esophagus could be a nuisance.

Conclusion

The use of the penile skin for reconstructing the cervical esophagus was first introduced by Kaplan and Markowicz for the following reasons:

(1) Full thickness: This avoids contraction and enables prosthesis to be removed early.

(2) Tubular: It is a preformed tube, thus avoiding longitudinal suture line with its likelihood of breakdown, leakage and fistula formation.

(3) Hairless: This provides a hair-free esophageal lumen.

(4) Distensible: The graft can easily be sutured to the wide pharyngeal opening above and the narrow esophageal opening below.

(5) Easily replaceable: The donor site can be easily covered with skin graft without any serious complications. The penile skin should not be used in a post irradiated case.

Summary

A case of carcinoma of the hypopharynx treated with surgical resection and reconstruction of the cervical esophagus using a penile skin graft is presented. The swallowing activity of this patient was successfully restored. The patient died about a year after the surgery with local recurrence and mestatasis to the bones and lungs.

A list of references may be obtained by writing The Journal.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Ophthalmic Aspects Of Cellulitis

(Case Report)

Robert S. Rosner, M.D.

CLINICALLY, erysipelas and cellulitis have similar appearance and can occur anywhere in the body. They occur following a wound that is usually considered trivial. When the region of the eye and orbit are involved, it is the ophthalmologist who is faced with this rare and very serious problem. The differential diagnosis includes cellulitis, erysipelas and gangrene. Cellulitis is defined as inflammation of the subcutaneous tissue with necrosis.

Every physician is horrified when he is called upon to treat gangrene, erysipelas or cellulitis. Imagine the horror of the ophthalmologist who is called by a dermatologist to see a case, and is told, "You've never seen anything like this before!" The dermatologist is correct — most of us have never seen such a case in a clinical lifetime. The condition was described as "hospital gangrene" during the Civil War, with almost a 50 per cent fatality.[1]

This presentation concerns a 72-year-old woman of English extraction, who had a "beauty treatment," after which her right eye "itched," and she "rubbed it." The entire area soon became swollen and painful. After three days, she was hospitalized at St. Alexis Hospital in Cleveland, Ohio, and I was then called as a consultant.

On physical examination, the patient was febrile, but alert. Pulse was 110 and respiration 28/m. Temperature was 101.4°. There was an intense erythematous edema. The skin was moist and blue, and the gangrenous process was spreading. The right upper and lower eyelids were infected, discolored and swollen. The skin was indurated. There was an area of necrotic tissue surrounded by edema and swelling that extended over the nasal bridge.

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Probing with a sterile instrument and cotton applicators released several areas of pus through skin openings that had clotted debris on them. The entire area was spreading downward toward the lower cheek. The eyeball could not be examined because of intense swelling. The characteristics of this lesion can be seen in Figure 1.

Cultures and smears were immediately sent to three separate laboratories (two hospitals and one private laboratory). An immediate intravenous chloromycetin drip apparatus was set up to run over the right orbital area at a constant rate: the main objective being to protect the eyeball and its visual integrity from this fulminating infection.

Laboratory Studies

(1) Blood study revealed 19,400 WBC.

(2) Differential 80 per cent Polys, 15 per

Figure 1

Figure 2

cent Lymphocytes, 2 per cent Monos, and 3 per cent Basophils.

(3) Total Protein: Albumin 47.00, Alpha 1 Globulin 5.9, Alpha 2 Globulin 9.7, Beta 14.1, and Gamma 23.1.

(4) Repeat blood sugar (fasting), Glucose Tolerance Test: Fasting, 75; 1 hour, 224; 2 hour, 201; 3 hour, 161.

(5) BUN, 25.

(6) Uric Acid, 3.5.

Blood pressure and vital signs were normal. The aorta was sclerotic and enlarged. X-ray of the orbit showed no abnormalities. All three laboratories reported Group A-beta-hemolytic streptococci as the causative organism.

The patient was immediately given 20 million units of Penicillin daily. The chloromycetin drip was continued. On the seventh hospital day, she was greatly improved but treatment continued for five more days, at which time she was discharged from the hospital for follow-up in the office. Figure 2 shows the patient's condition two weeks after she left the hospital (Ectropion of the lower eyelid). Fortunately, the eyeball was not affected and the patient retained 20/20 vision after healing.

Characteristics

Although gangrene of the skin is present with this disease, McCafferty and Lyons[2] and Wilson[3] stated that necrosis of the superficial fascia is the causative lesion and they preferred the term suppurative or necrotizing fasciitis.

Streptococcal gangrene is a distinct disease entity that may occur anywhere on the body.[4]

The term necrotizing fasciitis is preferred by most investigators.[5] Even though B-hemolytic streptococcus is very widely found in nature, it is a very rare disease; and in a susceptible patient, it can be a most fulminating disease.

Summary

A case of fascial cellulitis is presented involving the orbital region. Fortunately, the infection did not penetrate the deep ocular regions, wherein this could have led to the development of orbital cellulitis, tenonitis, septicemia or even cavernous sinus thrombosis. As in all infections, early diagnosis and treatment is most important.

A list of references may be obtained by writing The Journal.

Caution Against Nebulizers

HAND nebulizers should not be prescribed routinely for the treatment of asthma in children and adolescents because of research indicating they are unsafe in some cases, two pediatricians have warned in a recent issue of *Pediatrics*, the scientific journal of the American Academy of Pediatrics.

Drs. C. Warren Bierman and William E. Pierson of the Department of Pediatrics at the University of Washington School of Medicine, said the dangers posed by the nebulizers involved both the drugs and the aerosol propellants used in the nebulizer mixtures.

Citing previous animal and human studies, the researchers said the propellants — fluorocarbons — could accumulate in concentrations large enough to induce severe heart irregularities.

Special Article

A Challenge To The Health Care Industry*

Merlin K. DuVal, M.D.

There are few honors one treasures more than to be recognized by one's fellow workers. That you should have made me the recipient of the Charleston Area Medical Center Health Service Award this year is one of those honors. Each of you is, in his or her own way, a serious worker or supporter of the Health Care Industry in this part of the United States and it is a source of great personal pleasure for me to have been invited to be with you and to share some of my thinking with you this evening.

When I learned from Don Arwine, recently, that it was your wish to recognize someone who had made a contribution in the broad field of administrative medicine, I was all the more pleased because, as many of you know, administrative medicine has been thought, for years, to represent the bottom rung on the ladder. I was rather forcefully reminded of this only recently when the President of our university asked me if I would accept a speaking engagement to one of our local civic organizations. After I had accepted, he told me that in extending the invitation, the program chairman had said that he did not want anyone lower than a dean, to which the President had apparently replied, "There is no one lower than a dean."

Citizen's Rights

Anyone who traces man's efforts to improve his lot in the contemporary history of the United States is soon led to observe that, early on, we adopted a sort of "Human Bill of Rights" for our citizens. Surely, all among you would agree that we have long aspired to a condition in which each of our citizens would have access to food, clothing, and shelter. And, while we would probably agree that we have by no means achieved universal success in the pursuit of that objective, we have continued to make considerable progress. Some would say that this should come as no surprise since each of these commodities is, itself, a product; and, because America is a product-oriented society, the distribution of such commodities among our citizens should be easy for us compared with other nations in the world. But then we went further and added education as a universal right for all of our citizens. And, in this case, this commodity was not a product but a service; and its distribution proved to be quite a bit more difficult. And yet, the rather unique partnership that subsequently evolved in the United States to achieve this objective knows few counterparts anywhere in the world. We authorize our city and county governments to tax our property, and then we turn responsibility over to non-governmental school boards to implement and operate a system of public education. Where this leaves off, state governments, private philanthropies, and other private sources take over and assure a perpetuation of the educational opportunity, through the establishment of colleges and universities. Beyond that, the education and training of our graduate professionals, and the creation of new knowledge through research, receive support from state, federal, and industrial sources. No nation in the world has been any more successful in demonstrating how public and private resources can be mobilized and directed toward increasing men's options and providing them the background they need to bring quality into their lives.

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Right to Good Health

The addition of education to the Human Bill of Rights — significant though it was — was still not enough for our citizens. We came to realize that there was little enjoyment in being fed, clothed, housed, and educated unless we were also healthy. National surveys have repeatedly shown that one of the most important concerns of the average American citizen today is the fear that he will not enjoy good health. It was inevitable, probably, that we would move to consider access to health service as the next most desirable addition to the Human Bill of Rights. Finally, in 1956 — during the middle

*Presented during the Annual Charleston Area Medical Center Banquet, May 6, 1974, in Charleston, West Virginia.

years of the Eisenhower Administration — the White House Conference on Aging enunciated, for the first time, that health care should be considered a basic right for all of our citizens.

Ever since that pronouncement, many organizations and many people have directed their thoughts and their energies to the ways and means by which such a goal might be achieved; but the problems have proven to be considerable. Why are they so difficult? Unlike almost any other public policy that we have tried to implement, the problem of the equitable distribution of health services contains within it a contradiction so basic and so powerful as possibly to preclude its successful resolution except by defaulting to the national government in Washington. In a light-hearted way, this dilemma can be illustrated by citing two, utterly different, anecdotes. First, some years ago a group of temperance people visited Sir Winston Churchill to complain about his known affection for brandy. One of them pointed to an imaginary mark about waist-high on the wall of the room they were in and observed that Sir Winston had consumed enough brandy to fill the room to that mark. Replied the great Englishman with a gaze toward the ceiling, "So little accomplished, so very much to be done." The second: Many of us used to be enormously entertained weekly by Edgar Bergen and his friends Charlie McCarthy and Mortimer Snerd; and some of you may recall one of Mortimer Snerd's more pithy witticisms. In response to Bergen's oft-repeated question, "Mortimer, how can you be so stupid?" Mortimer would reply, "I don't know — but then I *do* have a friend in Washington." And, there you have it; on the one hand an acknowledgement that there is a great deal to be done and, on the other, an increasing sense among our fellow citizens that one can meet any problem if he has a friend in Washington.

The Problem of Health Distribution

What is the nature of the contradiction that underlies the problem that must be resolved if we are to find a way to distribute health services equitably to the people of our country? It has two ingredients.

Professional Role: The first is professional. In the United States, we have adopted a system for distributing health services that has three critical characteristics: A strong scientific and technological base; a distributional mode that hinges on rendering services for a fee; and a complex pattern of regulation and control that is voluntary and whose strength derives from the capacity of health professionals to be self-determining.

Let me focus, for just a moment, on the general subject of self-determination of our professions. To be of maximum value, a profession must serve as a trustee of the knowledge and the skills that constitute its reason for existence; it must select, examine, and monitor those who would be admitted to its study and its practice; and it must also accept responsibility for constantly seeking out and identifying the new techniques and technologies that will keep its offerings contemporaneous with the needs of the people it serves. These charges are freely given to the learned professions by our society. More importantly, society places very few constraints on its professionals as they administer and conduct their professional affairs. Most of us would probably agree that it is precisely this absence of constraints that makes it possible for professionals to be as effective as they are — capable of acting as free agents to the benefit of each of the individuals they serve.

In medicine, it is both this willingness and this capacity for self-determination — as well as the rights that we grant to each of our practitioners—that have provided us with such a strong profession. Yet, at the same time, it is this same self-determination that sets the stage for the conflict. We know, for example, that society already holds the physician in very high regard; it acknowledges his long and arduous training, his special expertise, his science and his art. As an individual, he is well-respected and well compensated. He is free to choose the town or city in which he will live and practice; he selects his own associates, his own hospital, the organizations with which he will participate as a member. He is free, if he chooses, to limit his practice and, at least to some extent, may even select much of his own patient clientele.

In association with his fellow physicians, he has mounted the most productive program of medical research that has ever been assembled, and he has established a record of scientific accomplishment that is the envy of the world and has no parallel in the history of recorded time. He can transmit and interpret the vital signs of a man, not only from the next room, but from a vehicle that is making an orbit around the moon; he has almost eliminated smallpox, diphtheria, and poliomyelitis; and he can manipulate genes, start life in a test tube, and transplant entire organs from one human being to another.

Such are the advances and rewards that are possible when a profession is free and has mem-

bers who, with the consent of the public they serve, are willing to define the scope, the direction, and the integrity of their effort.

As I have already implied, however, if this set of circumstances is the source of our professional strength, so is it also the source of rigidity that is apparently acting to prevent it from being appropriately responsive to the changing public mood.

Society's Role: And this brings me to the second ingredient in this contradiction. Remember that, in the last analysis, it is society that has made available the resources that have made possible our extraordinary professional advances. Now, this same society is telling us that it will no longer sit still in the presence of an increasingly widening gap between professional capability and the needs of our people. It simply is not going to continue to invest its great resources in scientific advances without seeing a more equitable return on its investment. I have already noted that society has expressed its concern that access to health services should be among the basic rights of our citizens. Society is also saying that the consumer can no longer be expected to organize a technology as complex as medicine has become, organize the medical care he needs out of highly specialized working parts that are only available to him here and there under the present system any more than one is expected to assemble his own automobile from one manufacturer's engine and another's chassis.

Earlier, I implied that the basic contradiction that exists between a free and self-determining profession and a public that is mandating an equitable access to the services rendered by that profession may be irreconcilable without the intrusion of another element—our "friend in Washington"—the national government. Of course, the government is already deeply involved in health affairs. As long ago as 1798, it created the Public Health Service to provide medical services to sick and disabled seamen. In the following years, although it moved relatively slowly, the federal government gradually undertook a broader public health responsibility by establishing relationships with state and local health departments for the purpose of controlling communicable diseases and improving sanitation. It then began to provide direct services through specific federal programs, such as the Bureau of Indian Affairs of the Department of the Interior. It developed a sophistication in the collection of health statistics and conducted various studies to identify and highlight significant health problems in the nation from time to time as, for example, the landmark report of the Committee on the Costs of Medical Care in the early 1930's. But, even to that time, direct federal intervention into health care matters was almost invariably limited to specified federal beneficiaries, such as the merchant seamen, members of the armed forces, Indians, and, more recently, our veterans.

Direct Federal Support

The establishment of the National Cancer Institute in 1937 opened a new era with regard to the government's role in health by offering direct federal support for health research in the private sector, a move which culminated in the creation of the extramural programs of the National Institutes of Health. Since World War II, the further inclination of the federal government to intercede in health matters is apparent through its programs in manpower; categorical programs for certain needy groups, such as mothers and children, and migrant farm workers; the development of regulatory powers through the United States Department of Agriculture and the Food and Drug Administration; and, more recently, an entrance into the field of health care financing through Medicare, Medicaid and, before long, national health insurance.

Having had the privilege of being exposed—perhaps over-exposed is a better word—to the intrinsic workings of government as it intrudes, increasingly, into health matters, I am forced to the conclusion that there is no single point of intrinsic intelligence operating at the federal level in which we can place much confidence as we try to address the enormous problem of the equitable distribution of health services. This does not mean that government does not have a role. On the contrary, there are certain aspects of this problem that probably can best be accomplished by the federal sector. For the time being, at least, certain of our citizens remain clearly dependent upon the government for the direct provision of health services and, while this may change in the future, no one of you would deny that appropriate medical care for the members of our armed forces, our veterans, our Indians, our Coast Guardsmen, our federal prisoners, and certain others must be assured.

Further, the government probably has a continuing role in the indirect provision of services through grants and contracts designed to stimulate private organizations and state and local health departments to provide subsidized care to specific beneficiaries, such as migrant workers, the inner-city poor, mothers and infants, and so forth.

I would submit that the federal government also has a stake in both the development and the regulation of many of the resources that are available for health care. In this context, I would include the research programs of the National Institutes of Health, the manpower programs of the Health Resources Administration, the inspections, regulations, and safety standards promulgated by the Food and Drug Administration, and the meat inspections of the Department of Agriculture.

I also am persuaded that the federal government can, very properly, serve us well by adopting some form of a national health care financing program in order to insure that lack of ability to pay is obliterated as a reason for inequitable access to the health care delivery system. In other words, I am one of those who freely champions the development of a proper program of national health insurance.

Strength At Local Level

At the same time, I am concerned that, in the face of the possibly irreconcilable contradictions between the self-determination of the health professional and the declared right of the people to have access to his service, we may be more deeply attracted to the Mortimer Snerd viewpoint of turning to Washington for help. I am *not* happy with this because I remain convinced that the strength of this nation resides in its townships, cities, and districts, rather than in its District of Columbia; that the wisdom and rationality of local decision-making far outstrips the best that can come from Washington; and that the solutions that people like you and me put in place to resolve our own problems are very much to be preferred to the solutions that derive from the opportunism and the expediency that characterize the political marketplace.

Why do I hold this view? Frankly, my own experience with the problems that can be generated by too much reliance on federal assistance leads me to believe that, if we long continue to rely on our friends in Washington things will probably get worse before they get better. I do not believe that this philosophy is a necessary ingredient of all progress, but I do think that the American propensity — so beautifully described in the last century by Alex de Tocqueville — to organize for the purpose of doing something, can be counterproductive. One of the fundamental precepts that we teach all medical students is that, above all, one should do no harm. In some situations, in other words, the best advice may be: "Don't just do something, stand there." I have never yet known a homeowner who, as an amateur "do-it-yourselfer" did not occasionally make something worse by his tampering.

We have now accumulated about ten years of experience with this type of tampering in the health care industry in the United States, and I can best make my point by drawing examples from that experience.

Early in the course of the national debate as regards the right to health care, there were those who guessed correctly that equitable access to health services was, indeed, going to prevail as public policy. And particularly in federal circles, such persons proved to be quite capable of putting in place legal instruments and authorities designed to accommodate to those inequities.

Investments in Research

Let me be specific. Early on, it was reasoned that we need only increase our investment in basic biomedical research so that we could learn to prevent disease, reduce its costs, and enhance the general health of the public. Shortly after the second world war, therefore, the annual budgets of the National Institutes of Health were allowed to increase from approximately $100 million to over $2.2 billion with that objective in mind. I concede, of course, that the benefit of that investment has been considerable. Vaccines have been developed that do, indeed, prevent disease; we have learned of the association of high-fat diets, smoking, and high blood pressure to coronary artery disease and stroke; we have started to reduce the incidence of mental retardation and congenital anomalies; we have learned how to prevent dental cavities; and so forth. But there were some spin-offs from this investment that we clearly did not anticipate. The investment produced a technology that was so advanced that it made it possible for us to transplant kidneys and hearts, keep patients alive in coronary care units, and develop x-ray therapy and laser beam treatment for some of our patients with cancer. I do not decry any of this; on the contrary, these advances have rebounded to the benefit of society. But, in the typically American tradition, once these technologies were developed, we began to insist that they be made available to all who might need them, and we thus increased the demand for them. There is no way, of course, that one can market technology this advanced without at the same time drastically increasing the cost of illness. Our tampering, therefore, could be said to have partially solved our problem — but it substituted another.

Take another example. In our earlier years, federal officials decided that every small community should have its own hospital facilities and, under the Hill-Burton program, we proceeded to spend millions of dollars to implement that policy across the United States. The result was an unnecessary duplication of expensive facilities; a marked over-abundance of hospital beds, and an emphasis on hospitalization of patients who might have been better handled in another setting; all with the result that further escalation of costs occurred.

Increased Number of Professionals

There was another group that thought the answer to America's health care problems could best be resolved by increasing the number of physicians and other health professionals. Untold millions of federal dollars were subsequently invested in the establishment of new medical schools, expanding the enrollment in existing medical schools, and in otherwise greatly stepping up the output of health manpower. This is not to say that society has not gained by implementing this federal decision, but I often wonder if we have been conscious of its price. And, when I say price, I am not only talking about dollars. Along with our new investments in technology, the production of new manpower resulted in a heightening of public expectations; and instead of closing the gap, we widened it. The combination of our new technology and our new manpower also hastened the rate at which specialization displaced first-contact medicine. And, unfortunately, increasing the number of physicians did not, in any way, change the patterns of distribution of those medical manpower; indeed, all we did was further increase the number of health professionals in the affluent parts of our urban and suburban communities. We accomplished nothing for those areas that were underserved except to amplify our awareness that they were underserved. Worse, we also produced an even further escalation of cost.

Medicare

And, one more example. In 1965, our national government adopted Medicare for the purpose of trying to help those who had reached the age of 65 meet the costs of any illness with which they might be afflicted. The gains from this program have been considerable; but so also have been the penalties.

Both as part of, and also independently of Medicare, private insurance to meet the costs of hospitalization became increasingly available. Today, well over 70 per cent of America's citizens are covered, at least in part, with some form of health insurance. But it is human nature that, if one adds a new tool to his tool-kit, he will use it. Once we had put in place this instrument for meeting the cost of hospitalization, is it so surprising that we put patients in hospitals because the bills would be paid? Thus, the very instrument we created became part of the problem rather than part of the solution.

This is what I mean when I use the term, "tampering." The complexities of the health care delivery system are great. Simple solutions are usually not the best solutions. Illness is unpredictable; it cannot be budgeted; its appearance cannot ordinarily be controlled. Any single, national solution that one may propose for coming to grips with a problem with these characteristics carries the inherent risk of making the situation worse, rather than better.

Local Problems: Local Solutions

I can think of no better example of the best way to solve a problem than what you have done here in the development of the Charleston Area Medical Center. Local people, using local incentive and local ingenuity can come to grips with a local problem with a substantially greater likelihood of achieving success than can any "friend in Washington." There are, of course, individual pieces of similar enterprises that are in one state or another of development all across the United States today, but I can think of none that has made greater progress in tying together the several elements that make up a total package than yours has. Overnight, you have become one of the ten largest private, non-profit, acute care organizations in the United States. You have found a way to merge the previously independent services available at the Charleston General, McMillan and Memorial Hospitals and yet each retains just enough of its own independence and identity to maintain its own support and clientele. You have combined centralized services, allocated and deployed the most expensive and sophisticated of your resources; integrated your master planning and management functions; and now, with your new relationship to West Virginia University you have reached out to embrace education and research which, along with your patient services, constitute the golden triangle that all of us in Medical Administration have tried so hard to assemble in a useful and meaningful way in our respective areas of this nation. Truly, you have brought both excellence and rationality to the Kanawha Valley through this effort.

I congratulate all of you and thank you for giving me the privilege of sharing this evening with you.

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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Lomotil puts him back in the game.

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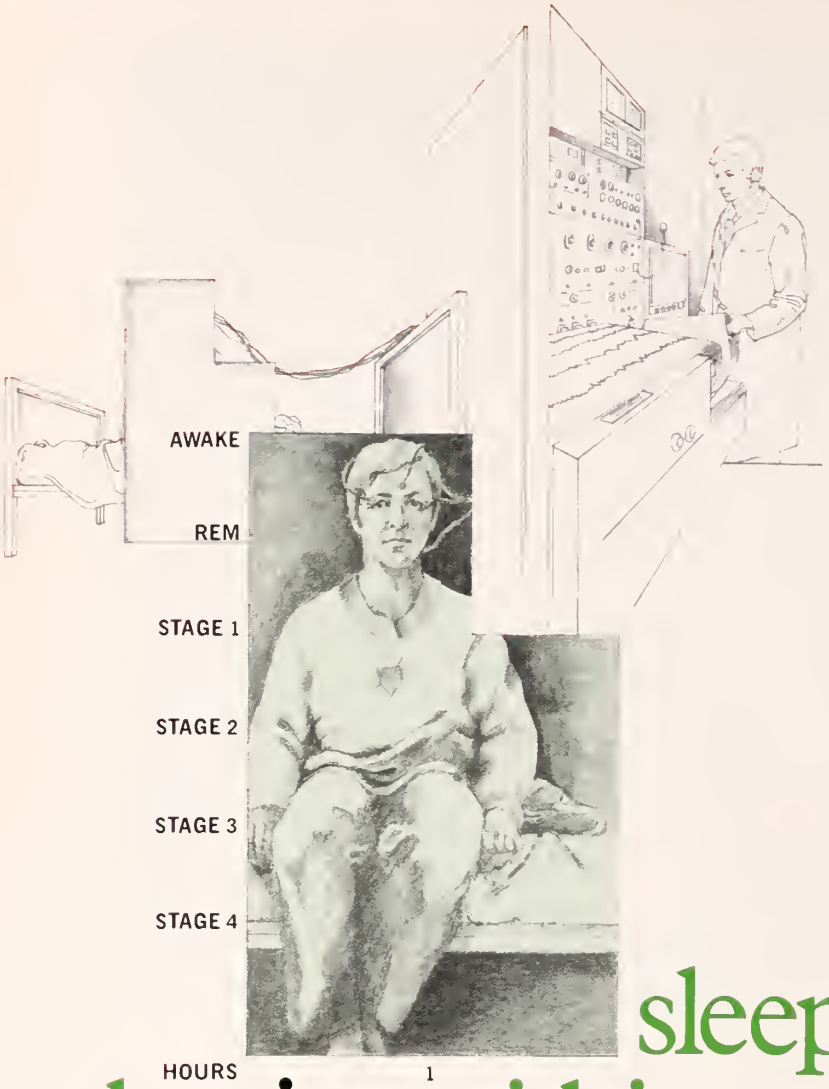
Lomotil usually stops diarrhea promptly. This rapid action halts the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate antibiotic therapy should be given along with Lomotil.

Lomotil has few side effects, and those that do occur are generally mild.

Lomotil®
TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
diphenoxylate hydrochloride ..... 2.5 mg.
(Warning: May be habit forming)
atropine sulfate ..... 0.025 mg.

Usually stops diarrhea promptly.



sleep begins within 17 minutes, on average ...

an initial benefit of

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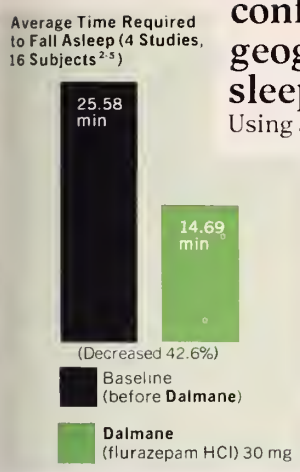
(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]



confirmed by clinical studies in four geographically separated sleep research laboratories[2-5]

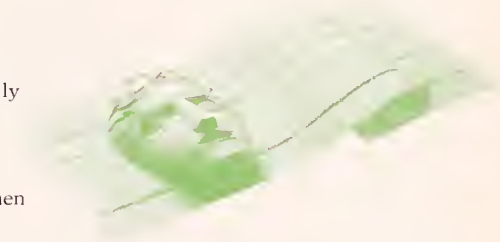
Using a 14-night protocol involving eight insomniac and eight normal subjects, four studies confirmed the sleep-inducing effectiveness of Dalmane (flurazepam HCl) and the reproducibility of this response. On average, one 30-mg capsule induced sleep within 17 minutes. In all these studies, Dalmane induced sleep rapidly, reduced nighttime awakenings, and provided 7 to 8 hours of sleep without repeating dosage[2-5]

Dalmane (flurazepam HCl) induces and maintains sleep, with relative safety

Dalmane is generally well tolerated; morning "hang-over" has been relatively infrequent. While dizziness, drowsiness, lightheadedness and the like have been noted most often, particularly in the elderly and debilitated, physicians should be aware of the possibility of more serious reactions, as noted below.

Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.



when restful sleep is indicated

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(flurazepam HCl)

One 30-mg capsule *h.s.* — usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.* — initial dosage for elderly or debilitated patients.

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- sustains sleep 7 to 8 hours, on average, without repeating dosage

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4. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ
5. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc, Nutley NJ

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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Carolina, P.R. 00630
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Just 'Dyazide' once daily or twice daily
No inconvenient potassium supplements
Nor special K^+ rich diets needed as a rule

Two prime reasons patients drop out of hypertensive therapy are (1) the patient failed to understand directions, and (2) the regimen was overly complicated. Dosage is simple with 'Dyazide', easily understood, once or twice daily, depending on response. There's no need to complicate the regimen with potassium supplements or unwieldy potassium-rich diets.

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A message from . . .

The President

PRAISE THE LORD AND PASS THE AMMUNITION

ALTHOUGH only 70 per cent of the physicians of the United States are members of the American Medical Association, the AMA literally works for and represents 100 per cent of us. In this country organized medicine *is* the AMA. It is a federation of 50 *very different* State Medical Associations and many *very different* Specialty Sections who do work and sacrifice for us all. There is, of course, a large professional staff, recently pruned; nevertheless, the great massive effort must voluntarily be ours. There are gain-seeking politicians among us, but I'll tell you, they are a very small minority.

The average American, by almost incessant pounding from the ultra liberal segments of society, has been conditioned to think of the AMA as some kind of a medical union whose only purpose is to protect the economic interests of its members. Incidents in our ranks have given credence to this attitude — but it remains for the "great silent majority" of this organization to uphold, foster and bequeath to those who would follow us, the ideals and dedication in service to mankind. Sociologists would have us think that "without discrimination due to race, creed, color, age, sex, national origin *or disease*" is original. How arrogant!

With notice of a special $60 assessment to offset inflation which we have recently received from the AMA, there is a summarization of the countless benefits, innovations, services and legislation which the AMA has accomplished for all Americans — even to the limit of advising Marcus Welby!

Whether it is the accreditation of hospitals, the prevention of automobile injuries, the protection of amateur athletes, the promotion of environmental and occupational health, or whatever, the AMA is involved and productive. It is a record to instill pride in every member.

Finally, the AMA is you and me. It is as good or as bad as you and me. Professionally, we are more effective in it than out of it. We *are* doing a good job of "promoting the art and science of medicine — and the betterment of public health."

Bill Gilmore

WILLIAM E. GILMORE, M. D., *President*

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EDITORIALS

A STAND AGAINST ENCROACHMENT

The clinical convention of the AMA was held two months ago, but the memory lingers on. It will be remembered for the stand of the House of Delegates against encroachment on its constitutional rights by the AMA Board and staff. The membership resented the abrupt interjection of fiscal reforms at a time when individual physicians and component societies had little time for discussion prior to the meeting.

The suggested dues increase of $90 was excessive at this stage of our medical economy, and although the House compromised on a $60 assessment, we can be sure all these suggested reforms will return to plague the House at the June meeting.

Physicians do not object to a moderate increase in dues, such as a cost-of-living increment, but there should be long and earnest study before an increase in dues becomes fixed and irreversible.

The ban on advertising in AMA publications was an ill-conceived proposal. Loss of income from this source would have to be supplemented by dues or assessment and could amount to $40 to $50 per member for this absurd scheme. Aside from monetary matters, the ban on advertising would alienate our best friend in the whole health society, i.e., the pharmaceutical industry. Certainly, if we probibit advertising, we must be consistent and exclude drug exhibits from the national convention. So the greatest medical show on earth would cease to be. Physicians read and are informed by the advertising pages of their journals. There is no conflict of interest in advertising and prescribing.

The House of Delegates in its zeal to oppose the reforms may have overreacted in regard to the various publications of the AMA. Many of these could function with fewer issues and some could be eliminated entirely. To this writer, the magazine, *Prism*, is useless. The same type of medico-social material is presented in a dozen unsolicited journals in a highly attractive manner.

Committees and councils remain the life blood of the AMA, but many of them can sustain a cut in personnel, meetings and responsibilities. To eliminate these committees and councils will only make the staff and board more powerful, make the House of Delegates less accountable, and make the rank and file a bunch of zombies.

It is hoped that the actions of the House of Delegates may, temporarily, at least, blunt the previously announced plans and program of the hierarchy. It is true that reorganization of the AMA is in order if we are to survive as an effective deterrent to government medicine.

Changes, however, cannot be conceived in the heat and brevity of a convention. Physicians,

councilors, component societies and the State Medical Association's House of Delegates should present their ideas and proposals in concrete form to our State AMA Delegates.

The Journal will publish all resolutions, proposals and proceedings of any society or individual if they are sent to the *Journal* office.

CHANGING PROGRAM EMPHASIS IN VOCATIONAL REHABILITATION

Recent Congressional action redirects somewhat the public vocational rehabilitation program (*P. L. 93-112: The Rehabilitation Act of 1973; proposed regulation published May 28, 1974*). State rehabilitation agencies are now mandated to give first priority to those disabled who are the most severely vocationally handicapped. These are persons with such impairments as paraplegia, amputation, blindness, deafness, heart disease, epilepsy, severe mental illness, etc., who require multiple services (medical and non-medical) over an extended period of time to achieve vocational success.

Implementation will affect the agency's relationship with physicians in the following ways:

(1) Counselors must now strengthen arrangements with you to promptly learn of persons with severe handicaps whom you identify in your practice and for whom there may be a vocational problem.

(2) Counselors will henceforth accept for services some of your referrals which a year ago they might have turned down as too severely disabled to vocationally rehabilitate. The new emphasis warrants more risk-taking as well as greater effort.

(3) Some categories of patients for whom the agency previously would have provided sponsorship for medical care will now be increasingly turned down. There has been no significant increase in appropriations. Thus, the decision to serve a severely disabled applicant means that someone else must be passed over. Since rehabilitating the severely handicapped is much more expensive and time consuming, fewer total persons can be served than was previously possible.

(4) Quite specific information on functional loss of clients will be needed from medical reports. Highly selective placement in employment, so often required to succeed with the severely handicapped, requires much more precise matching of the patient's functional capacity with the job requirements.

As the rehabilitation agency accommodates to this new emphasis, it will phase out serving as a resource for underwriting a variety of medical service costs for the poor and indigent. The differences between its role and that of such programs as Medicaid and Medicare will become more evident. The basis for rehabilitation agency sponsorship of an impaired individual will be a substantial *vocational* handicap arising from a disability. Public responsibility for meeting patient needs for diagnostic work-ups, surgery or medical care to save life, relieve pain, improve quality of life and other such matters is clearly being assigned by Congress to medical programs rather than this agency.

Rehabilitation will continue to underwrite considerable medical evaluation and treatment, but these will be highly goal-oriented, clearly relevant to a decision about vocational feasibility or contributory to attaining a vocational objective for the client rather than based on meeting a medical need *per se*.

Studies show that for the type of clientele which we shall now emphasize the savings in public money will run about $5.00 for every dollar spent. The youthful paraplegic, for example, will generally cost the public well over one quarter of a million dollars if he remains dependent. Thus the $10,000 to $50,000 needed to bring him into optimal physical condition, educate him in a marketable skill and get him adjusted in a stable job situation is a splendid investment of public funds. Physicians' political philosophy has always endorsed self-sufficiency over public paternalism as a key ingredient of a healthy society. The evolving agency role is aligned with that philosophy.

The agency will need your help in the following ways to fully succeed:

(1) We need early referrals. You are the first to know when major disability strikes. Vocational services early in the disability give a higher incidence of success and at a lesser cost. The passage of time displaces rehabilitation assets (a concerned employer, work habits, family car, etc.) with liabilities (lost self-confidence, adjustment to Welfare and dependency, loss of job skills, etc.).

(2) We need patient and medical community understanding of the *vocational* focus of our sponsored services to relieve the pressure on field staff to serve as a fiscal agent for underwriting medical care.

(3) We need all the insights you can give us

on our purchased medical evaluations on the specific functional capacities/limitations of clients served.

The agency will increasingly shoulder for you the responsibility for the economic, psychological, social and vocational problems of the more severely disabled of your patients who do have work potential. I feel this will be of real help to you as well as the patients. The new emphasis of the agency promises to benefit all of us. —

Leslie F. McCoy, M.D., Medical Director, West Virginia Division of Vocational Rehabilitation.

Our Readers Speak

IMPRESSED WITH THE CARTERS

I have just returned from the annual meeting of the Southern Medical Association which was held in Atlanta, Georgia. My wife and parents attended the meeting with me. My father practiced medicine over 50 years, primarily in the coal fields of West Virginia, and is now retired and living in Huntington, West Virginia.

On my arrival in Atlanta on Saturday, I telephoned the Governor's mansion. Jimmy Carter is the Governor of Georgia and serves on the Brotherhood Commission of the Southern Baptist Convention with me. He was out of town at the time I called. The receptionist who answered the phone took my telephone number. About an hour later the phone rang in my room and it was Mrs. Jimmy Carter. She invited all of my family out to the mansion that Saturday night.

This was a very happy occasion. My parents looked forward to this with great anticipation. The visit to the mansion was even greater than the anticipation. Mrs. Carter met us, talked for awhile with us in the library, then very graciously took us on a tour of the mansion.

Shortly before we left, she went upstairs and brought down a small book of photographs descriptive of the Governor's home, which she had so attractively assembled and had published.

Just before we departed from the Governor's home, Mrs. Carter asked my father to give a prayer of blessing for their house and family — my father was only too happy to do so. This was a very moving time for all present.

Governor Jimmy Carter gave his personal religious testimony of his beliefs and faith in a book which I edited and which was recently published by Broadman Press. It is entitled *Politics and Religion Can Mix.*

At the time of our visit Governor Carter was in St. Louis and was scheduled to preach in a church the following Sunday morning. I am very impressed with this family.

Claude A. Frazier, M.D.

Doctors Park—Bldg. 4
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New Studies Offer Promise In Treating Arthritis

Continuing studies in compatibility of human tissues that have played an important role in human organ transplants now offer a promising lead to new methods of prevention and treatment of arthritis, says an editorial in a recent issue of the *Journal of the American Medical Association.*

Physicians learned early in their work of seeking to transplant kidneys, hearts and other organs from one person to another that it was important to have "a good tissue match." That is, the transplanted organ must have certain characteristics that match as closely as possible the body makeup of the recipient.

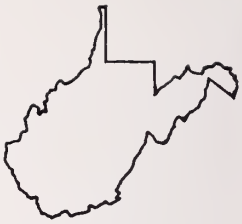
The best "match" found to insure against rejection of the organ is a transplant between identical twins, with mother and daughter match following.

A large group of most important factors involved in the tissue match are known as HL-A antigens (human leukocytic antigens). Studies have determined that predisposition to certain allergies and other diseases occurs in families with typical arrangement of HL-A antigens. This work is now being extended into the field of rheumatic disease and arthritis. In certain types of arthritis almost all patients have the presence of HL-A 27 antigen.

Actually, the HL-A antigens play a part in the body's own defense mechanism against foreign tissue. Tissue from donors with nonmatching patterns of the HL-A antigens tend to be rejected by the recipient, as it often happens, for example, in kidney transplants.

It is possible to determine the pattern of the HL-A antigens early in life. The presence of HL-A 27 will indicate a strong possibility that the individual will develop certain types of rheumatic disease.

GENERAL NEWS



AMA President Honor Guest At 108th Annual Meeting

Dr. Max H. Parrott of Portland, Oregon, President Elect of the American Medical Association, will be among the honor guests at the 108th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 20-23.

Max H. Parrott, M. D.

Dr. Philip M. Sprinkle of Morgantown, Chairman of the Program Committee, said Doctor Parrott has accepted an invitation to speak at the first session of the House of Delegates on Wednesday afternoon, August 20. Doctor Parrott, an obstetrician-gynecologist, will be installed as President of the American Medical Association during the annual meeting at Atlantic City in June. He will succeed Dr. Malcolm C. Todd of Long Beach, California, the current President.

A native of Canada, Doctor Parrott moved to Oregon in his youth, becoming a naturalized United States citizen. He is a graduate of Oregon State College and received his M. D. degree in 1940 from the University of Oregon Medical School. Immediately after finishing his internship training in Oregon, Doctor Parrott, then an anesthesiologist, entered the U. S. Army Medical Corps where he attained a distinguished record during World War II in Sicily, Normandy and Great Britain.

Following the war Doctor Parrott took his postgraduate specialty training in obstetrics and gynecology at the University of Michigan and then returned to Portland to open his practice. He now practices there with four associates, also obstetrician-gynecologists.

Doctor Parrott is a member of the American Board of Obstetrics and Gynecology, the American College of Obstetrics and Gynecology, and the Pacific Coast Obstetrical and Gynecological Society. He is a member of ACOG's Committee on Gynecological Practice.

In his service to the AMA Doctor Parrott has devoted major attention to the high priority of formal areas of continuing medical education, computer systems and medical data banking and to continuous review of the AMA's scientific activities.

Prior to his election at the AMA's 1974 Annual Convention in Chicago, Doctor Parrott was the senior member of the AMA's Board of Trustees. He was then completing the second year of his third, three-year term, the maximum tenure permitted on the Board. He also was a former Chairman of the Board. Before being elected to the Board, Doctor Parrott had been an Oregon member of the AMA's House of Delegates for five years and also had been a member of the AMA's Council on Legislation.

A Past President of the Oregon Medical Association, Doctor Parrott helped establish the Oregon Medical Political Action Committee in the early 1960's and became its first Chairman.

Interesting Scientific Program Arranged

Doctor Sprinkle also announced that some of the nation's other most prominent physicians and surgeons have accepted invitations to present papers at the three general scientific sessions which will be held on Thursday, Friday and Saturday morn-

ings. Names of the other guest speakers will be announced in future issues of *The Journal.*

Business Meetings Scheduled

The pre-convention meetings of the Council will be held on Wednesday morning, August 20.

The first session of the House of Delegates will be held on Wednesday afternoon and the final session on Saturday afternoon, August 23.

State AAFP Scientific Assembly In Morgantown April 25-27

The 23rd Annual Scientific Assembly of the West Virginia Chapter of the American Academy of Family Physicians will be held April 25, 26 and 27 in Morgantown at Lakeview Country Club.

Some 18 physicians will speak at the scientific sessions held during the three-day meeting. The Assembly will open at 8:45 A. M. on Friday, April 25, and conclude on Sunday at 12:30 P. M.

William D. Crigger, M.D.

David L. Schmidt

Speaking at the annual banquet Saturday evening will be Mr. David L. Schmidt, President of Schmidt, Pryor and Company, Management Consultants in Mission, Kansas. Mr. Schmidt has a B.A. degree from Wichita State and a master's degree from the University of Kansas. He is the author of many management articles, booklets and cassette tapes.

William D. Crigger, M. D., South Charleston, is President of the West Virginia Academy, and John W. Traubert, M. D., of Morgantown, President-Elect, is Program Chairman. Participants will be welcomed during opening remarks Friday morning by John E. Jones, M. D., Dean of the West Virginia University School of Medicine.

Scientific Speakers

The tentative program includes the following scientific speakers and their topics:

Friday Morning: "Use of Oral Hypoglycemic Agents" — Jerome H. Aarons, M.D., Department of Medicine, Magee Women's Hospital, Pittsburgh; "Clinical Immunology—New Tool for the Family Physician"—Gerald M. Penn, M.D., Director of Clinical Laboratories, Children's Hospital, Columbus, Ohio; "Allergy—Recognition, Evaluation and Management"—Raymond T. Benack, M. D., Wheaton, Maryland;

Friday Afternoon: (Infectious Diseases Seminar) "Progress in Treatment of Virus-Caused Illness"—Ralph E. Haines, M.D., Professor, Pediatrics and Medical Microbiology; and Director, Infectious Diseases Division, Children's Hospital, Columbus, Ohio; "Antibiotics in Review—Classes and Indications"—William J. Holloway, M.D., Director, Infectious Diseases Research Laboratory, Wilmington (Delaware) Medical Center; "Indications and Contraindications. for Antibiotic Combinations"—Perry Kalis, M. D., Division of Infectious Diseases, WVU School of Medicine; "Infectious Disease—Mini-Rounds—Panel Discussion"—Albert S. Klainer, M.D., Professor and Chairman, Department of Medicine, Morristown (New Jersey) Memorial Hospital, Rutgers University;

Saturday morning: "Office Diagnosis of Gynecologic"—John G. Boutselis, M.D., Professor, Obstetrics and Gynecology, Ohio State University College of Medicine; "Managing the Disturbed Elderly Patient"—George R. Smith, Jr., M.D., Allegheny Clinic, Shawsville, Virginia; "Minimal Brain Dysfunction—Recognition and Management" —Archibald M. Jones, Jr., M.D., Marietta, Ohio;

Saturday afternoon: "Pathogenesis and Treatment of Gout"—Irving Kushner, M.D., Professor of Medicine, Cleveland (Ohio) Metropolitan General Hospital; "Blood Lipids—How Do We Interpret Results?"—Terry Langer, M.D., Department of Cardiology, University of Pennsylvania; "The Inner Child of the Past—Its Role with Our Patients" —W. Hugh Missildine, M.D., Psychiatrist, Columbus (Ohio) Children's Hospital; "The Clinical Pharmacist—A New Professional"— C. Wayne Weart, WVU School of Pharmacy;

Sunday morning: "Management of the GI Bleeder"—A. D. Ghaphery, M.D., Wheeling; "The Acute Asthmatic—Primary Management"—W. Keith C. Morgan, M.D., Professor of Medicine and Chief, Pulmonary Medicine, WVU School of Medicine; and "Urologic Problems in Children"—Roy Witherington, M.D., Professor and Chairman, Urology, University of Georgia School of Medicine, Augusta.

Registration

There will be a registration fee of $35 (including two luncheons) and a banquet fee of $12.50 per person. There will be no registration fee for nurses, interns, residents and students.

The Annual Assembly has been approved for 20 hours of credit in Category 1 by the AAFP.

Association Holds CME Surveys In Huntington, Charleston

Two continuing medical education accreditation surveys have been conducted by the State Medical Association in recent months through its Committee on Medical Education and Hospitals. Surveys were conducted at St. Mary's Hospital in Huntington on November 20 of last year and at Charleston Area Medical Center on January 15 and 16.

The members of the site survey team at St. Mary's were Dr. T. Keith Edwards of Bluefield, Chairman; and Thelma Wilson, Director of Education at Beckley Appalachian Regional Hospital. Serving on the CAMC team were Drs. Robert D. Hess of Bridgeport, Chairman; and Roy J. Yates, Southern West Virginia Clinic, Beckley.

Accreditation qualifies an institution or specialty society to grant continuing medical education credit in Category 1 of the Physician's Recognition Award of the American Medical Association to physicians attending its education programs. The results of the above two surveys will be announced following the next meeting of the Association's Committee on Medical Education and Hospitals.

Accredited to date by the Association have been Beckley Appalachian Regional Hospital, Martinsburg Veterans Administration Center, the West Virginia Academy of Ophthalmology and Otolaryngology, and the West Virginia Chapter, American College of Surgeons.

Dr. Flood Named To AAFP National Commission

Dr. Richard E. Flood of Weirton has been appointed to the Commission on Legislation and Governmental Affairs of the American Academy of Family Physicians. The announcement was made recently by Herb L. Huffington, M. D., Chairman of the AAFP Board of Directors.

Doctor Flood is a Past President of the West Virginia Chapter of the AAFP and the State Medical Association. It was announced in *The Journal* last month that Doctor Flood has been appointed by the American Medical Association as one of eight representatives of medicine of the National Joint Practice Commission between medicine and nursing.

Doctor Flood also is Chairman of the Association's Nurses Liaison and Resolutions Committees, a Delegate to the AMA, a member of the West Virginia Medical Licensing Board, and a member of the Board of Directors of the Federation of State Medical Boards of the United States.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Feb. 10-13—Am. College Cardiology, Houston.
Feb. 13-15—Am. Coll. Emergency Physicians, Seattle.
Feb. 13-15—Southern Neurosurgical Soc., San Antonio.
Feb. 15-19—Amer. Acad. of Allergy, San Diego.
Feb. 17-20—Southeastern Surgical Congress, Atlanta.
Feb. 21-28—Am. Soc. of Clinical Pathologists and College of Am. Pathologists, Las Vegas.
Feb. 28-Mar. 5—Am. Soc. of Abdominal Surgeons, Orlando, Fla.

Mar. 1-4—Am. Assn. Pathologists & Bacteriologists, New Orleans.
Mar. 2-7—First Annual Maryland Hospital Medical Staff Conf., White Sulphur Springs.
Mar. 1-6—Am. Acad. of Orthopaedic Surgeons, San Francisco.
Mar. 6—Am. Ortho. Society for Sports Medicine, San Francisco.
Mar. 8—Conference, WVU Dept. of Medicine, Morgantown.
Mar. 13-19—Am. Coll. of Allergists, Bal Harbour, Fla.
Mar. 20-21—Natl. Conf. of Rural Health, Roanoke, Va.
Mar. 30—April 4—Am. Coll. of Radiology, Portland.

Apr. 6-10—Am. Assn. Neurological Surgeons, Miami Beach.
Apr. 9-10—Spring Meeting, W. Va. Chapter, Am. Academy of Pediatrics, Elkins.
Apr. 9-12—Am. Gynecological Soc., Phoenix, Arizona.
Apr. 14-16—Am. Assn. for Thoracic Surgery, N. Y. City.
Apr. 21-24—Recent Advances In Allergy, Hot Springs, Va.
Apr. 23-26—Science Assembly, Pa. Chapter of Am. Coll. of Emergency Physicians and Emergency Depart. Nurses Assn., Philadelphia.
Apr. 25-27—W. Va. Chapter, AAFP, Morgantown.
Apr. 27-30—W. Va. Acad. of Ophth. & Otol., White Sulphur Springs.
Apr. 28-May 3—Am. Acad. of Neurology, Bal Harbour, Fla.
May 5-8—Am. Coll. of Ob. & Gyn., Boston.
May 11-15—Am. Urological Assn., Miami Beach.

June 14-19—AMA Annual Meeting, Atlantic City.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

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WVU Medical Center
–News–

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

THREE physicians have joined the full-time faculty of the Charleston Division of the West Virginia University Medical Center, bringing the full-time faculty in Charleston to 14.

Dr. Marshall J. Carper of Charleston recently closed his family practice to become the second full-time faculty member at the Family Practice Center in South Charleston. He joins Dr. C. Carl Tully, Director, as Associate Professor of Family Practice at the Center, which is operated by WVU, Thomas Memorial Hospital and the Charleston Area Medical Center.

Marshall J. Carper, M. D.

Dr. German Lizarralde, a native of Bogota, Columbia, is the new Director of Internal Medicine and Professor of Medicine in the Charleston Division. He most recently served as Associate Professor in the Department of Medicine at the Medical University of South Carolina.

Dr. Narinder N. Sehgal, a native of Panjab, India, is an Associate Professor of Obstetrics and Gynecology. His most recent position was Associate Clinical Professor in the Department of Obstetrics and Gynecology at the University of California's Davis School of Medicine.

Doctors Lizarralde and Sehgal will have offices at the Memorial Division of the Charleston Area Medical Center.

WVU Hospital Annual Report

Admissions to West Virginia University Hospital are increasing but average length of stay is decreasing, according to the hospital's statistical review of its fiscal year that ended June 30, 1974.

The annual report lists 14,006 admissions as compared to 13,691 for the preceding fiscal year with the average length of stay down to 9.1 from 9.9 days — generally happy news for patients, whether or not costs rise.

That WVU Hospital is being used to its fullest advantage and that more and more doctors are referring their patients for diagnosis and specialized care is indicated in other figures included in the report.

For instance, there were 98,559 outpatient visits as compared to 93,855 in the 1973 report. Laboratory procedures topped the one million mark at 1,006,071 compared to 945,296 in 1973, and emergency room visits totaled 37,320 — up from 32,649 the previous year.

Additional specialty clinics opened during the last fiscal year brought the total to 50 and included oncology (daily), plastic surgery (weekly), rheumatology (weekly), and myelomeningocele (monthly).

Specific, staggered appointment times that lessen the waiting period for patients have also been introduced at WVU Hospital. To facilitate the new service in the clinics, an evening clerk is on duty to telephone and pre-interview referral patients who work during the day, so that records will be ready when they arrive for their first appointment. The clerk also assists referring physicians who have evening office hours.

For families of surgical patients, volunteers known as Friends of University Hospital staff an information desk in the hospital's main lobby. Waiting relatives register and are kept informed of the patients' progress by the volunteers, who maintain telephone contact with the operating room, the recovery room and the intensive care unit. The service also makes it easier for family members to receive personal reports from attending physicians.

Profits from the Friends' only money-making venture, the hospital gift shop, provided most of the bright new decor seen in the Outpatient Clinics. And the annual report listing of 22,688 volunteer hours reflects the organization's gift of time as well.

New Psychologist Appointed

S. Jane Solberg has been appointed an Assistant Professor in the Department of Behavioral Medicine and Psychiatry, West Virginia University School of Medicine.

Doctor Solberg, a native of Minot, North Dakota, received her A. B. degree from St. Olaf College in Northfield, Minnesota, and her M. A. and Ph. D. in psychology from the University of Minnesota.

She comes to WVU from Minneapolis where she served as a psychology associate in the Veterans Administration Hospital.

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CHARLESTON, WEST VIRGINIA

The Month in Washington

• **From the Washington Office of the American Medical Association.**

THE 93rd Congress concluded its two-year session that was highlighted by the historic Watergate affair.

Congress held hearings but took no action on a National Health Insurance (NHI) program. However, the lawmakers approved during the last days a health planning bill anticipating NHI. Earlier, they voted for a liberalization of the Keogh plan allowing self-employed people to set aside much higher amounts for their retirement subject to tax deferral. Aid for medical education legislation foundered and will be revived this year.

The Democratic victories in the November elections, the Democratic push for legislative reforms within Congress, and the downfall of Rep. Wilbur Mills (D., Ark.) as Chairman of the House Ways and Means Committee signalled a more liberal and activist Congress in 1975.

The House Democratic Caucus voted to pack Ways and Means, which has the prime jurisdiction over NHI, with liberal Democrats and enlarge its membership to 37, compared to 25 last year. The ratio in 1975 is 25 Democrats, 12 Republicans. Rep. Al Ullman (D., Ore.) is the new Chairman. For the first time, Ways and Means will be broken into subcommittees. The Subcommittee on Health is headed by Rep. Dan Rostenkowski (D., Ill.).

The Caucus stripped Committee Democrats of their long-held power to appoint all House Democrats to committee slots, a move that weakened Ways and Means.

Strong New Hospital Controls

On the final day of the session in December, the last Congress approved legislation giving health planning agencies strong new authority over hospital services and construction. The lawmakers failed to reach agreement on health manpower bills that would have required many young physicians to serve in shortage areas and dictated apportionment of specialization education at medical schools.

Both measures had stirred controversy and generated opposition among health groups. The planning bill's most disputed original provisions would have paved the way for public utility-type regulation of physicians' services as well as those of institutions. These were dropped from the final version sent to the White House.

The health manpower bill had been toned down from the one first backed by Sen. Edward Kennedy (D., Mass.) and approved by the Senate Labor and Public Welfare Committee. A more moderate substitute was adopted on the Senate floor minus such items as relicensing of physicians. However, medical schools and medical provider organizations, including the American Medical Association, had contended the scaled-down bill was still too harsh in its effect on young physicians and medical schools. This opposition plus Sen. Kennedy's decision to block action last year killed the health manpower legislation. Meantime, existing programs will continue as in the past.

The planning bill, approved by a 236-79 House vote a few weeks previously, was swiftly adopted by a House-Senate conference which ironed out differences in the bills approved by the two chambers. The compromise was adopted by the House and Senate only hours before the 93rd Congress quit.

Conceived as a preparatory measure to gear for a national health insurance program, the planning bill sets up an elaborate system of federal standards and regulations covering state and local health planning agencies and endowing them with strong power to force institutions to abide by planning decisions on services. All new hospital building and expansion would be subject to rigid controls.

The aim is to avoid waste and duplication, provide efficiency, raise quality and availability, and relieve shortage areas. The incentive for the states is federal aid. The ultimate impact of the bill will be increased control from the state and federal level on institutional health care.

Writing the regulations to carry out the program will take a long time as will the ensuing administrative work of putting the planning scheme into operation. The bill provides for the establishment of local and state agencies for the development of comprehensive health plans under national guidelines developed by the Secretary of Health, Education and Welfare. Health systems agencies would be set up throughout the United States. The bill requires that all states enact certificate of need legislation; it expands existing review authority to include authority to review existing facilities and services as well as proposed facilities. The measure authorizes federal assistance to no more than six states which have rate setting legislation or are planning such legislation in the near future.

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Obituaries

JAMES P. JONES, M. D.

Dr. James P. Jones, a retired physician of Pennsboro, died on December 5 at his home there following an extended illness. Doctor Jones practiced in Pennsboro for 30 years before retiring in 1968. He was a medical advisor to the Ritchie County Selective Service Board for 25 years, and was a Baltimore & Ohio Railroad surgeon in Pennsboro for 30 years. He was 64.

A native of Baltimore, Doctor Jones was a graduate of Marietta College and received his M. D. degree in 1937 from the University of Maryland School of Medicine. He was a member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association, and the American Medical Association.

Survivors include the widow; two daughters, Mrs. John D. Azelvandre of Columbus, Ohio and Mrs. Robert W. Whitaker of Washington, D. C.; and a son, James P. Jones, Jr., of Washington, D. C.

CLARENCE F. MORRISON, M. D.

Dr. Clarence F. Morrison of Weston died on December 25 at his home there. He was 72. A native of Sutton, Doctor Morrison had been in family practice there since 1961, following 30 years of service as a U. S. Navy physician.

Doctor Morrison was a graduate of West Virginia Wesleyan College and the two-year West Virginia University School of Medicine, receiving his M. D. degree in 1931 from the University of Maryland School of Medicine.

Survivors include three sons, Alpheus Morrison of Tucson, Arizona, Karl Morrison of Virginia Beach, Virginia, and Sam Morrison of Winfield; a daughter, Mrs. Elizabeth Ann Blaine of Hamburg, New York; three brothers, Herman Morrison of Corpus Christi, Texas, Robert J. Morrison of Sutton, and William Morrison of Grantsville; and three sisters, Mrs. Helena Berry of Richmond, Virginia, Mrs. Ruth Ward of Buckhannon, and Mrs. Martha Jordon of Weston.

EDWARD B. HOLMES, M. D.

Dr. Edward B. Holmes of Parkersburg died on September 18, 1974. A specialist in otolaryngology and ophthalmology, Doctor Holmes was a native of Attaway, Virginia. He was a graduate of Roanoke College at Salem, Virginia, and received his M. D. degree in 1928 from the University of Virginia School of Medicine. He was 68.

Doctor Holmes interned at Charleston General Hospital and took specialty training at the Indiana University School of Medicine. He was a member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association and the American Medical Association.

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) Oral Suspension
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.
Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).
Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.
Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.
Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.
Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.
How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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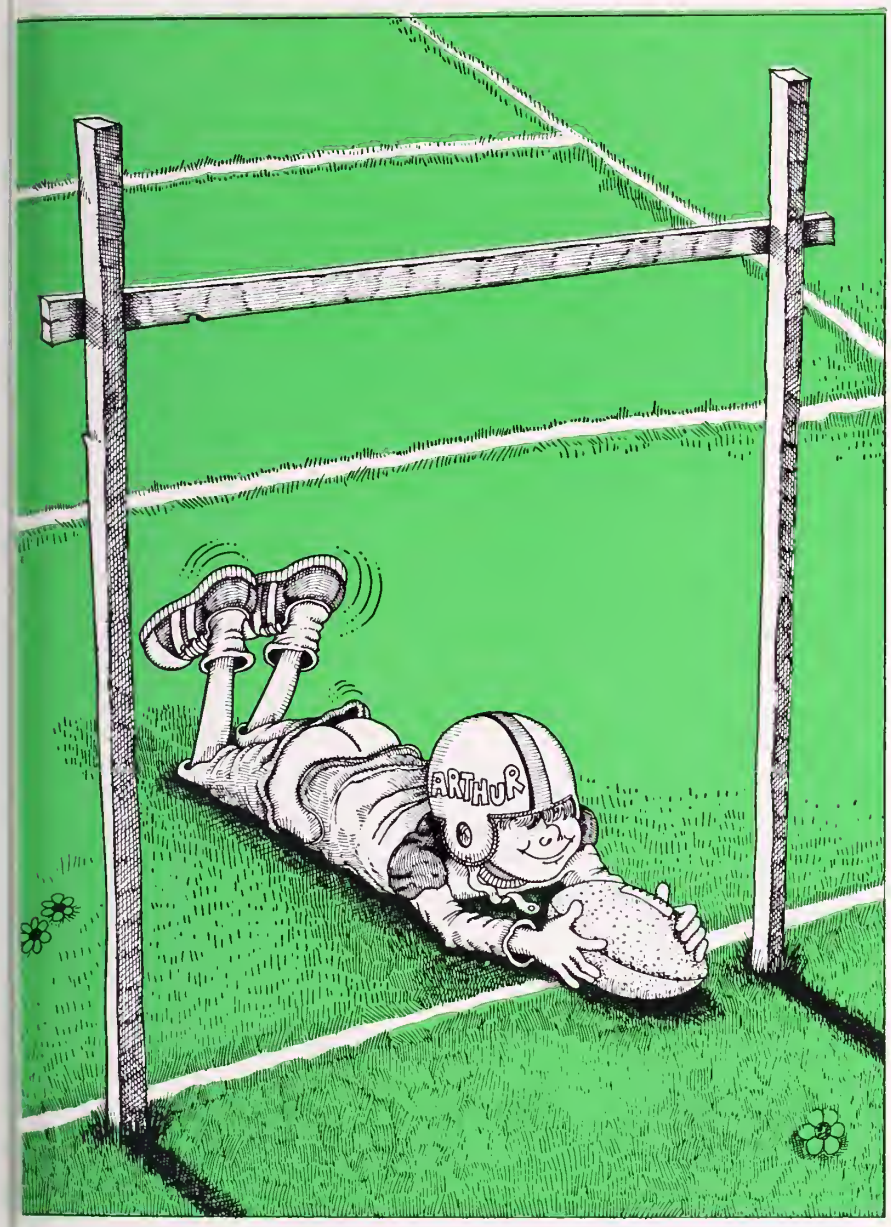

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

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County Societies

MERCER

The annual Christmas Banquet of the Mercer County Medical Society was held on December 12. Following an enjoyable social hour and dinner the meeting was called to order by the President, Dr. Hawey A. Wells, Jr. Dr. James P. Thomas of Bluefield was installed as President for 1975.—John J. Mahood, M. D., Secretary.

MONONGALIA

The Monongalia County Medical Society met on December 3 at the Old Mill Club in Morgantown. The following officers were elected for 1975: Drs. Herbert E. Warden, President; Robert J. Nottingham, President-Elect; James D. Martin, Vice President; H. Summers Harrison, Secretary; and Hubert A. Shaffer, Treasurer.

Elected Delegates to the West Virginia State Medical Association were Drs. Charles E. Andrews, George A. Curry and Robert L. Smith, for one year; and Drs. W. Gene Klingberg and Roy J. Stevens, for two years.

The Society unanimously passed a motion requesting the State Department of Health and Dr. N. H. Dyer, Director, to reinstate Dr. Isaiah A. Wiles as Director of the M & I Project in Monongalia County.—H. Summers Harrison, M. D., Secretary.

Four CME Courses Scheduled At UK In March, April

Four continuing medical education courses have been scheduled during March and April by the University of Kentucky College of Medicine. The courses are: "Annual Obstetrics-Gynecology Review," March 13-15, Continuing Education Center for Health Sciences, Lexington; fee, $125; "Retinoscopy Course," April 9; fee, $100 (limited to 40 registrants); "Current Concepts In Opthalmology and Neurophthalmology," April 10-11; fee, $80; and "Seminar On Law and Medicine," April 24-26, Colleges of Medicine and Law, University of Kentucky Law Building Auditorium; fee, $65.

Emergency Physicians, Nurses Plan Pennsylvania Meeting

The Pennsylvania Chapter of the American College of Emergency Physicians and Emergency Department Nurses Association will sponsor the Fourth Annual Science Assembly, April 23-26, at the New Hilton of Philadelphia.

Medical Education credits have been approved for 22 hours by the American College of Emergency Physicians and the American Medical Association. For further information, contact R. M. Celmer, R.N., at 2513 Brown Street, Philadelphia, Pennsylvania 19130. Dr. Joseph A. Fortuna of Pittsburgh is Program Coordinator.

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Book Reviews

MEDICAL PHARMACOLOGY—By several authors. Lange Medical Publications, Drawer "L", Los Altos, California. Fourth Edition.

This soft-bound volume of 721 pages represents a comprehensive coverage of its subject. The authors are well known physicians who are professors in the University of California School of Medicine, San Francisco. The arrangement of the *Table of Contents,* composed of eight sections, is excellent for ready reference. For the office, hospital and emergency room it can be a rewarding text, and for casual reading it has much to recommend it. A gift item.—C. Frederick Fisher, M. D.

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

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AMA Journal Urges Congress To Halt Tobacco Subsidies

A stern challenge to Congress to halt subsidies of the tobacco industry is voiced in a recent issue of the *Journal of the American Medical Association.*

Weldon J. Walker, M. D., of the cardiopulmonary Center of White Memorial Medical Center, Los Angeles, and member of the JAMA editorial board, charges:

"Congress is using our tax money, in many ways, to subsidize increased death and disability among our citizens, as well as those of the rest of the world."

Doctor Walker pointed to the health hazards of smoking, established 10 years ago by the Surgeon General's report on smoking and health, and re-emphasized many times in the intervening years by additional hard data. "When one stops smoking, the increased risk of death from coronary and peptic ulcer disease ceases immediately," he says. The slight dip in tobacco consumption that followed the Surgeon General's report has brought a drop in deaths from both these diseases.

"This dramatic breakthrough against coronary disease apparently has resulted chiefly from a modest reduction in tobacco consumption."

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item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

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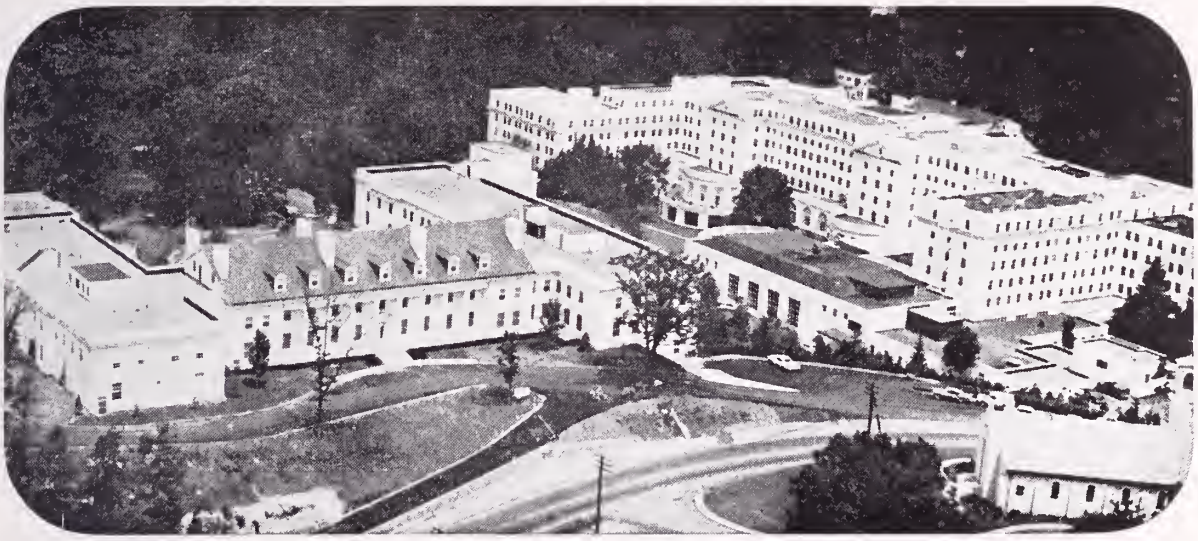

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Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on diuretics, primarily thiazides. Sore throat, fever, pallor or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, allergy or bronchial asthma; and in those with glucose-6-phosphate dehydrogenase deficiency, where hemolysis may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12.

Usual adult dosage: Two tablets b.i.d. for 10 to 14 days. For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 1000; Prescription Paks of 40, available singly and in trays of 10.

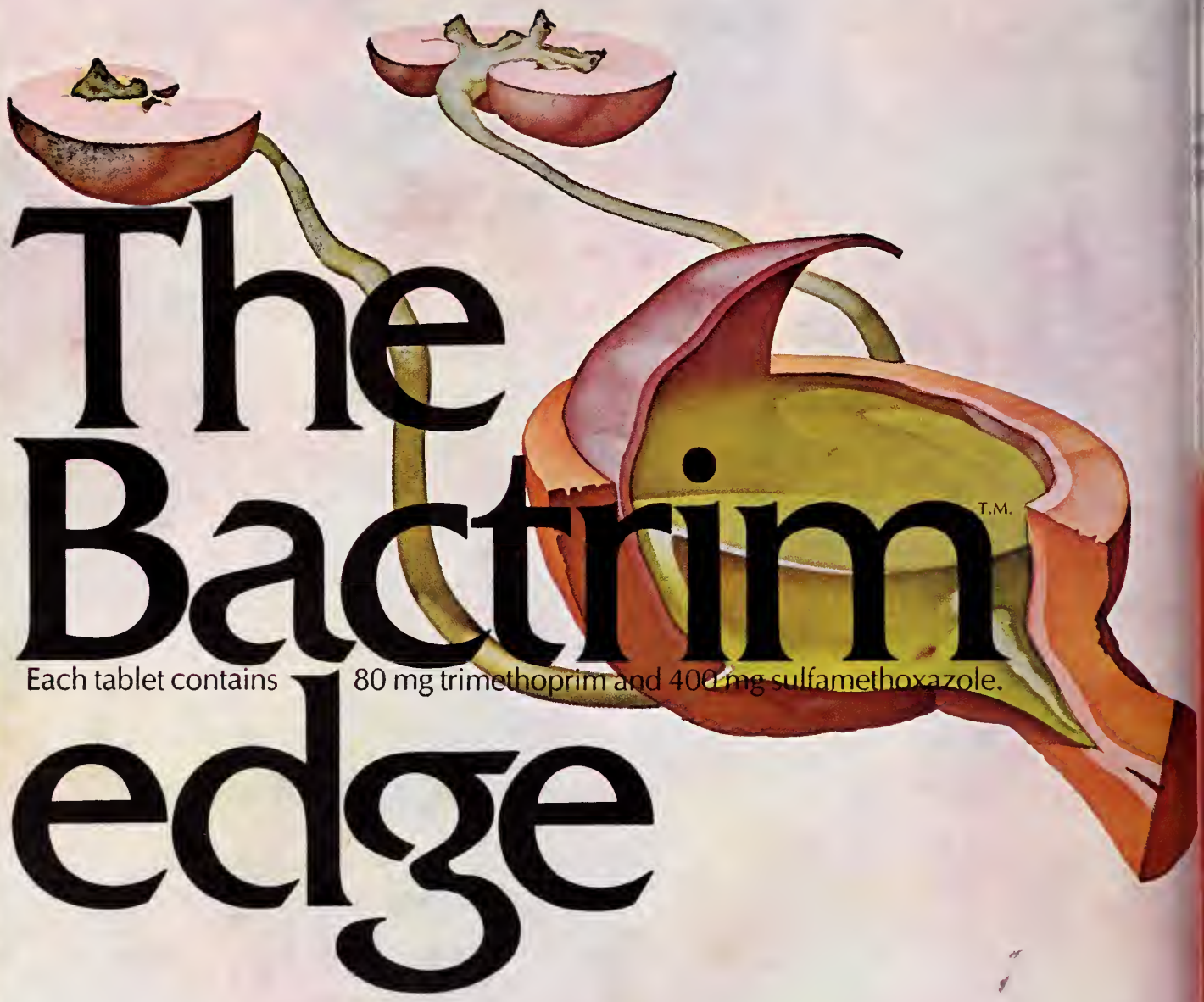
ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Bactrim™

Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

ROCHE

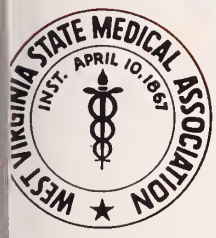


Each tablet contains 80 mg trimethoprim and 400 mg sulfamethoxazole.

A high assurance of antibacterial activity
in cystitis, pyelonephritis and pyelitis diagnosed as chronic and due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which appears on preceding page.

the West Virginia



Medical Journal

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CAL ASSOCIATION

71 No. 3

108th Annual Meeting, The Greenbrier
August 20-23, 1975

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AND A WIDE VARIETY OF OTHER PHARMACEUTICALS

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DISTA PRODUCTS COMPANY
Division of Eli Lilly and Company
Indianapolis, Indiana 46206

400944

MARCH 1975

Both ofte

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in and/or severity of grand mal sei require increased dosage of star convulsant medication; abrupt w may be associated with tempora crease in frequency and/or seve seizures. Advise against simulta gestion of alcohol and other CNS sants. Withdrawal symptoms (si those with barbiturates and alco occurred following abrupt disco (convulsions, tremor, abdomina cle cramps, vomiting and sweat addiction-prone indlviduals und

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are other advan-
ng Valium for the
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ty with secondary
symptoms: the
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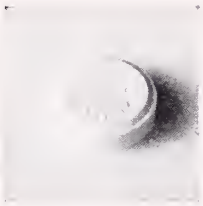
means that im-
is usually apparent
nt within a few
than in a week or
two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

because of their predisposi-
ation and dependence. In
ctation or women of child-
weigh potential benefit
ble hazard.

If combined with other psy-
anticonvulsants, consider
rmacology of agents em-
such as phenothiazines,
rbiturates, MAO inhibitors
idepressants may potentiate
ual precautions indicated in
rely depressed, or with latent
r with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

MARCH
1975

Vol. 71 No. 3

The WEST VIRGINIA Medical Journal

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Member 1975

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Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

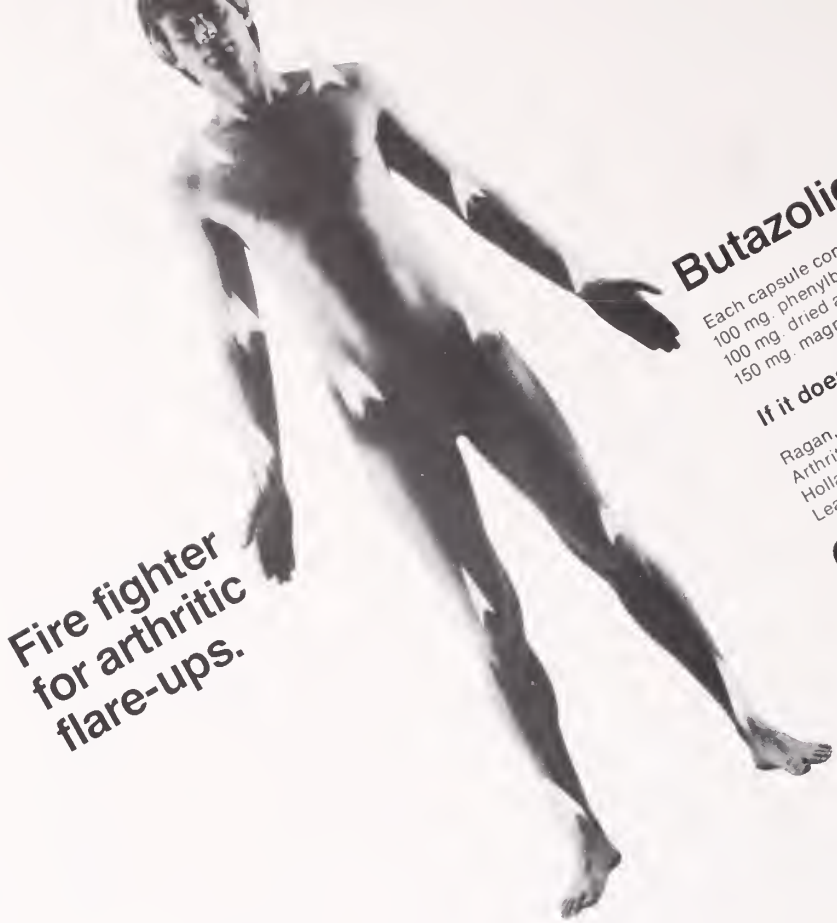
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Fire fighter for arthritic flare-ups.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications. Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications. Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy; blood dyscrasias, renal, hepatic or cardiac dysfunction; hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings. Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions. The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

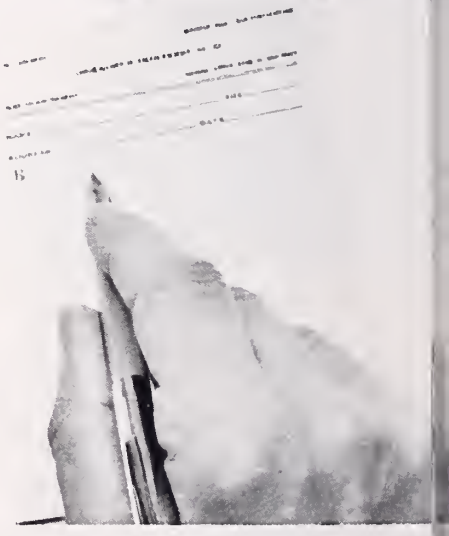
CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23261

Bioequivalenc



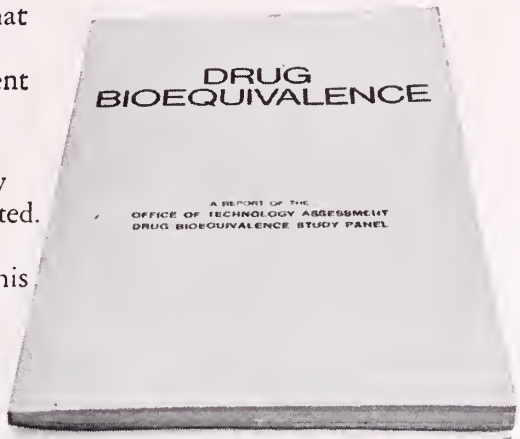
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

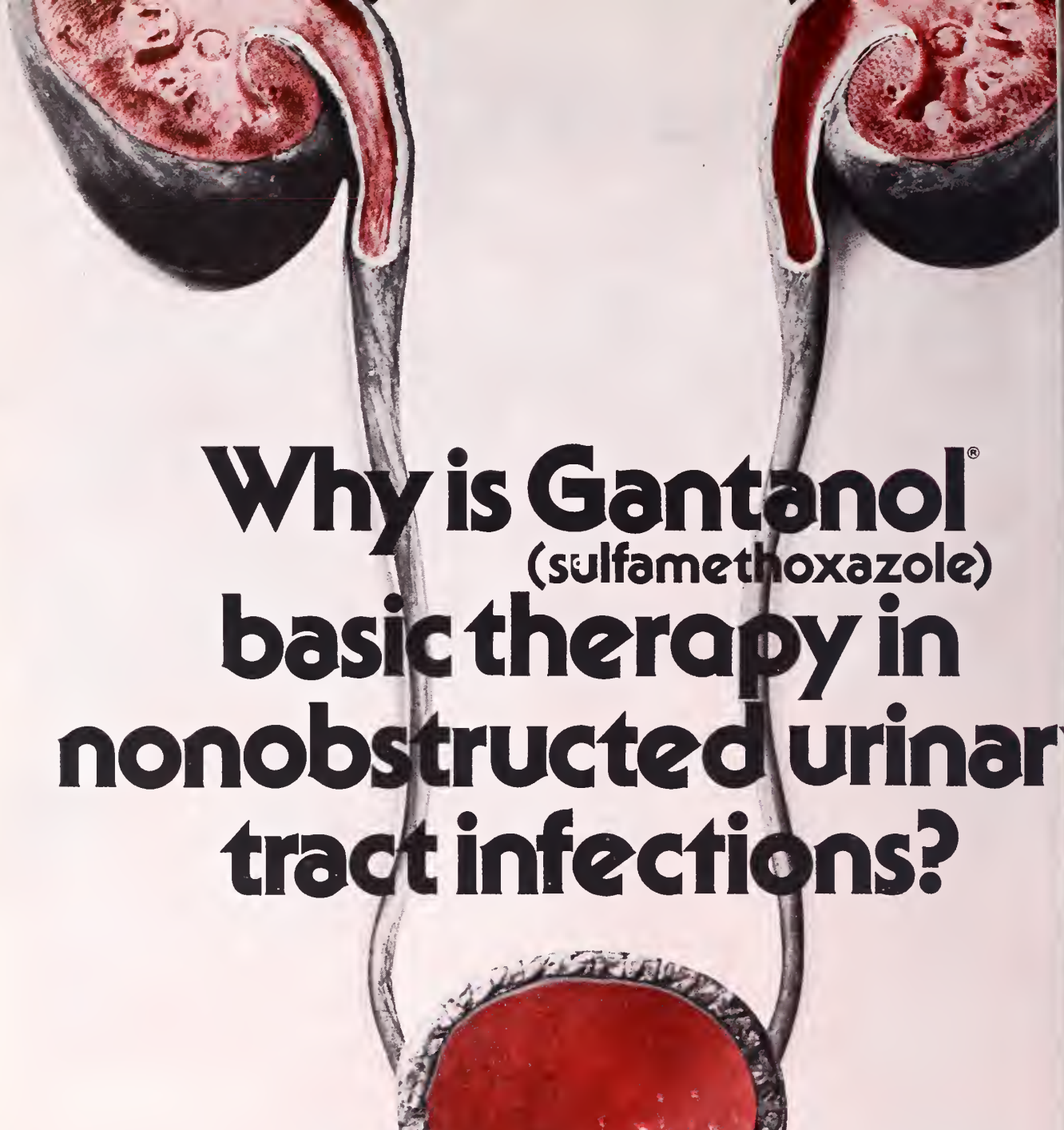
The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

protecting the integrity of your prescription



Why is Gantanol® (sulfamethoxazole) basic therapy in nonobstructed urinar tract infections?

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic strep-

tococcal infections and will not eradicate
vent sequelae (rheumatic fever, glomerulone
of such infections. Deaths from hypersensitivit
tions, agranulocytosis, aplastic anemia and othe
dyscrasias have been reported and early clinical sign
throat, fever, pallor, purpura or jaundice) may indicate
blood disorders. Frequent CBC and urinalysis with micr
examination are recommended during sulfonamide therapy.
cient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired r
hepatic function, severe allergy, bronchial asthma; in gluc
phosphate dehydrogenase-deficient individuals in whom
related hemolysis may occur. Maintain adequate fluid int
prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis,
tic anemia, thrombocytopenia, leukopenia, hemolytic anemi

Because it is considered a good choice...

- for efficacy in nonobstructed cystitis, pyelonephritis and pyelitis
- for control of susceptible *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*
- for prompt antibacterial blood and urine levels in from 2 to 3 hours after initial 2-gram adult dose
- for economical around-the-clock coverage
- for maximum patient cooperation with easy-to-remember B.I.D. dosage

Basic Therapy

Gantanol®

(sulfamethoxazole)

Tablets/Suspension
(0.5 Gm) (0.5 Gm/teasp.)

a, hypoprothrombinemia and methemoglobinemia); *allergic ctions* (erythema multiforme, skin eruptions, epidermal necroly- urticaria, serum sickness, pruritus, exfoliative dermatitis, ana- lactoid reactions, periorbital edema, conjunctival and scleral ction, photosensitization, arthralgia and allergic myocarditis); *trointestinal reactions* (nausea, emesis, abdominal pains, hepa- , diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* adache, peripheral neuritis, mental depression, convulsions, dia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous ctions* (drug fever, chills, toxic nephrosis with oliguria and ria, periarteritis nodosa and L.E. phenomenon). Due to certain mical similarities with some goitrogens, diuretics (acetazola- le, thiazides) and oral hypoglycemic agents, sulfonamides have sed rare instances of goiter production, diuresis and hypogly- nia as well as thyroid malignancies in rats following long-term ninistration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Tomorrow could also be the last day of the rest of your life—

If you don't like thinking about safety,
think where you might be without it.

National Safety Council

A reminder from the National Safety Council. A non-profit, non-governmental public service organization. Our only goal is a safer America.

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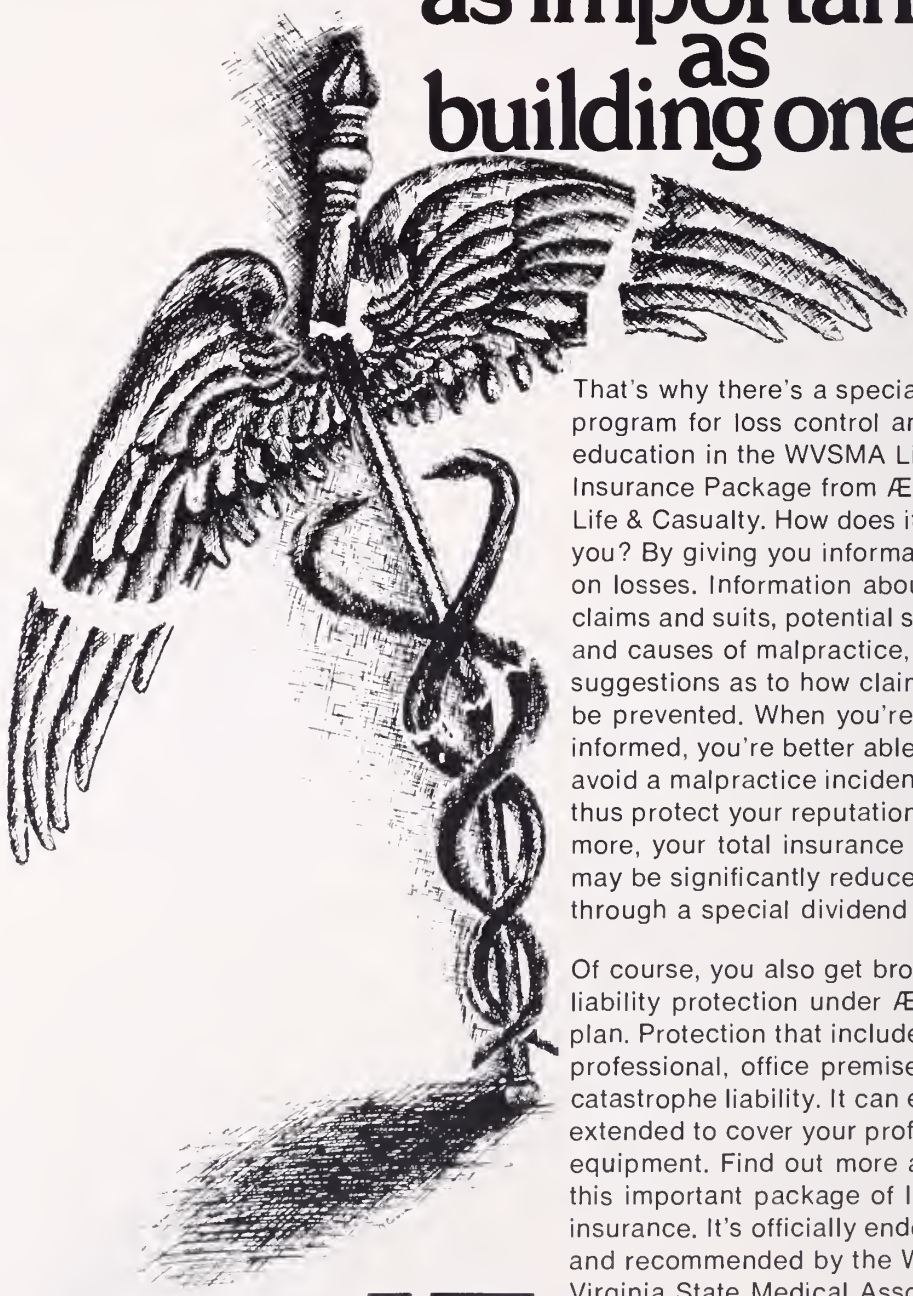

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The West Virginia Medical Journal

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Rocky Mountain Spotted Fever: Case Presentation and General Discussion

N. James Doll, M. D.

Rocky Mountain spotted fever (RMSF) is a tick-born rickettsial disease which, prior to the introduction of broad spectrum antibiotics, had a mortality of approximately 20 per cent. This has now markedly dropped, and RMSF is presently considered to be benign if appropriately and rapidly treated. The following case exemplifies a typical presentation of RMSF with its common manifestations.

The Author

- **N. James Doll, M. D., Resident in Internal Medicine, West Virginia University Medical Center, Morgantown.**

Case Report

H. S., a 16-year-old male, was admitted to West Virginia University Hospital initially on July 30, 1973. He was in excellent health until July 25, when he developed epigastric pain after a wasp bite on his abdomen. One week prior to the wasp bite he had been bitten by a tick on his right foot. On July 26, 1973, he developed a fever with shaking chills and sweats, a mild frontal headache, a generalized maculopapular eruption and conjunctivitis. He denied arthritis or arthralgia, penile discharge, exposure to drugs or hepatitis, cough, nausea, vomiting, diarrhea, neck stiffness, and exposure to sick animals or birds. He was admitted to another hospital on July 27, 1973, where routine laboratory work, blood, urine and throat cultures were undiagnostic. Heterophil antibody and febrile agglutinins (Typh. O, H; Para. A, B; B. abortus; and Proteus OX-19) were negative. The patient's temperature varied from 101° to 105.4°, and he was transferred to this hospital for evaluation.

His past history, review of systems and family history were noncontributory. His social history revealed farm dogs as pets.

On physical examination, his pulse was 114/min. The temperature was 104.2°. The blood pressure 100/50 mm. Hg. and respirations 18/min. There was a generalized maculopapular eruption on his trunk, extremities and face with initial sparing of his palms and soles. His conjunctivae were injected. Fundal examination was normal. The pharynx was mildly erythematous without exudation; the neck, supple; and the lungs, clear. A II/VI early systolic murmur was best heard along the lower left sternal border. There was slight right upper quadrant tenderness on abdominal examination. The liver and spleen were not palpable. Rectal examination revealed a tender prostate. Neurological examination was normal, and there were negative Brudzinski's and Kernig's signs.

Further laboratory studies revealed the following:

Hemoglobin	13.3
WBC	5,200 with 62 per cent bands 20 per cent neutrophils 14 per cent metamyelocytes 4 per cent lymphocytes
Platelets	38,000
Urine	1+ protein 6-10 RBC/HPF rare WBC/HPF many bacteria 0-2 RBC casts/HPF
Na	122
Cl	85
CO_2	20
K	4.2
BUN	31
Glucose	125
Creatinine	2.0
Total bilirubin	2.0
CPK	490

LDH	750
SGOT	309
Alkaline Phosphatase	75 IU
Chest x-ray	Normal
Lumbar puncture	Clear fluid with 6 leucocytes, protein of 26 and glucose of 65
Monospot	Negative
Febrile series (Typhus, paratyphus, B. abortus, Proteus OX-19)	Negative (except paratyphus C titer of 1:40)
Urine gram stains	No organisms
CSF gram stains	No organisms
Skin lesion	No organisms
Cultures of pharynx, blood, urine, stool, skin	Nondiagnostic
India Ink preparation of CSF	Negative
Fungal culture of blood	No growth
Fungal culture of CSF	No growth
AFB culture of blood	No growth
AFB culture of CSF	No growth
Acute & convalescent viral titers from stool, urine, throat, blood	Negative
Histoplasmin & intermediate PPD skin tests	Negative (at 72 hrs.)

On the second hospital day, a petechial rash erupted on his palms and soles. Hypotension, increasing lethargy and a depressed mental status developed. Coagulation studies, serum and urine electrolytes, and osmolalities substantiated the diagnosis of disseminated intravascular coagulation (DIC) and the syndrome of inappropriate antidiuretic hormone (SIADH). A CVP catheter was inserted and the patient was treated with chloramphenicol, heparin, saline and plasminate.

The third hospital day showed a marked response to his therapy and he continued to improve subjectively and objectively during the remainder of his hospital course.

Because of a gradual decline of the hematocrit and a low reticulocyte count, vancomycin was substituted for chloramphenicol on his ninth hospital day and was continued for the remainder of his antibiotic course without complications.

A repeat febrile series drawn on his sixth hospital day showed a Proteus OX-2 titer of 1:160; thus, substantiating a diagnosis of RMSF.

Comment

This case represents a common presentation of RMSF with an initial negative Proteus OX-19 titer. Diagnosis was made by history and clinical impression. Despite appropriate antibiotic therapy, diagnostic studies revealed renal, CNS, liver and possible cardiac involvement. DIC and SIADH developed but responded rapidly to appropriate therapy. Early recognition and therapy prevented an initial serious course from progressing to a possible fatal outcome.

Discussion

Rocky Mountain Spotted Fever was first recognized in Montana in 1873,[2] but Rucker credits Wood with the first reference in the literature[3] in which Wood reported cases in Boise, Idaho in 1896. Since then, there have been numerous reports from scattered areas throughout the United States. From the mid-1940's onward, however, an increasing majority of the cases reported each year come from states east of the Mississippi River. It is now primarily a disease of the South-Atlantic and South-Central states and is relatively rare in the mountain states. Recent incidence is greatest in Virginia, North and South Carolina, Wyoming, Tennessee and Idaho. As many as 12,000 ticks per acre have been found in central woodland sections in Virginia.[5]

The fundamental lesion in RMSF is a widespread vasculitis involving capillaries, arterioles, and small arteries.[1] Rickettsial invasion of and multiplication in endothelial cells leads to endothelial proliferation and swelling, perivascular inflammation, thrombotic occlusion, and necrosis of muscle cells in arterial walls.[1] The majority of the manifestations of RMSF are secondary to this vascular damage.

Harrell and his associates discussed the pathophysiology of this illness in the 1940's.[6-10] Endothelial damage lead to increased capillary permeability with subsequent increased interstitial fluid. Hypotension, peripheral edema or pulmonary edema may result. Shock secondary to the peripheral vascular collapse and hypoproteinemia may be the end result. However, Peterson, et al.[11] suggest that interstitial myocarditis may contribute to the hypotension. Thrombocytopenia[12-17] is frequently reported and consumption coagulapathy is less common.[16-18] Harrell and his co-workers propose endothelial damage as the etiology of the frequently observed thrombocytopenia. However, Garbee and Kelsey[17] suggest that thrombocytopenia may be secondary to peripheral sequestration of platelets. Observers have found that the disease is more likely to be severe when the platelet count is 100,000/cu. mm. or less.[13,17,19]

Besides the DIC syndrome, deficiencies of factors II, VII, and IX have been reported by Atkin and co-workers.[16] The petechial skin eruption results from thrombotic vasculitis with resultant ischemia. A similar etiology may produce CNS involvement[5] and occasionally myocardial, renal or hepatic injury.

RMSF is ordinarily transmitted to man in the United States by the bite of one of four species

of ticks. The most common are the dog tick (Dermacentor variabilis) in the East, and the wood tick (Dermacentor Andersoni) in the West.

The illness is a seasonal disease occurring between the months of April and September, corresponding to the season of greatest tick activity. Most patients give a history of a tick bite, and removal of the tick as soon as possible is very important. Peters[4] suggests that the longer an infected tick is attached, the more likely the person will be infected. He ascribes this as due to a phenomenon known as "reactivation" (described by Parker in 1938) in which an infected tick after hibernation must be warmed or ingest a fresh blood meal to "reactivate the rickettsia." Furthermore, something other than a person's uncovered hands should be used to remove the tick because infection may occur through feces or tissue juices. The incubation period of RMSF varies from three to twelve days, with a mean of seven days.

Symptoms and signs may initially be nonspecific. In 260 cases reported by Vianna and Hinman,[21] malaise, fever and rash were present in all cases. Headaches were present in 89 per cent, generalized myalgias in 68 per cent, nausea, vomiting and constipation in 66 per cent. Other less frequent features including arthralgia, splenomegaly, hepatomegaly, tender lymphadenopathy, chills, and generalized abdominal pain were reported in 10-25 per cent of patients.

The fever as reported by Hazard, et. al.[22] may be high and spiking with peaks to 105° or 106° F., as well as dramatic morning remissions of 3-5° F. However, the fever may also be persistently high with levels holding between 102-104° F.

The rash may be the sign that most frequently leads the physician to arrive at the correct diagnosis. The initial distribution and characteristics vary with authors' reports,[1,15,21,22,23] but it is usually macular or maculopapular occurring on the distal portions of the extremities. The rash may then become petechial, and its frequent occurrence on the palms and soles is probably *the single most diagnostic feature* of the illness.

Characteristically severe, the headache may be described as the worst headache the patient has ever endured. It is usually continuous and may be intractable to most therapy.

The duration of the illness depends primarily on the occurrence of any serious complications. In Vianna and Hinman's study,[21] the illness ranged from 7-40 days with a mean of 12 days. Thirty-two per cent had one or more complications with neurologic manifestations predominating. These included nuchal rigidity, convulsions, hemiplegia, and flaccid paralysis. Other complications cited were bilateral parotitis, interstitial pneumonitis, otitis media, myocarditis, oliguria, and vasculitis with skin ulceration.

Prognosis is generally good with early recognition and management. Most fatalities occur during the second week of illness corresponding to the time of the most severe vascular damage. These are usually related to shock or pulmonary complications. Since the 1960's, however, there has been a marked reduction in mortality. Of Snapes' 18 patients reported between 1969-1970,[24] there was only one death, and this patient did not receive early antibiotic therapy. In Vianna's and Hinman's 260 cases[21] from 1941 to 1970, there were 18 deaths (seven per cent) due to this disease. From 1941 to 1950, 15 of 116 patients (13 per cent) died and from 1951 to 1960, two of 110 patients (two per cent) died. From 1961 to 1970, there were no deaths among the 34 patients.

Diagnosis generally depends on the demonstration of either a positive complement fixation or Weil-Felix test. The W-F agglutinins usually are absent during the first week of illness but are present after the 10th day. A titer of 1:160 or above is the lowest titer considered diagnostic.[22,24,25] Complement-fixing antibodies may be demonstrated early in the second week of illness, but they usually peak between the 15th to 30th day.[22,25] With early treatment (on the sixth day of illness or earlier) it has been shown that the development of CF antibodies may not be detected with commercial antigen.[4]

Other laboratory methods less commonly employed include immunofluorescent tests and isolation of rickettsiae from the blood. Indirect fluorescent antibodies may be demonstrated from the ninth to twentieth day.[22] Hazard, et. al., isolated rickettsiae from nine of twelve patients whose blood specimens were drawn between the second and tenth day of illness.[22]

It is imperative to remember that these tests usually are negative early in the course of RMSF, and the treatment should be initiated on the basis of the physician's clinical impression. If deaths are to be prevented, the clinician must be prepared to make a tentative diagnosis during the first week of illness.

Therapy is directed toward the primary illness

and its associated manifestations and complications. Tetracycline and chloramphenicol are the antibiotics to be employed. Oxygen and infrequently assisted ventilation may be required when the pulmonary system is involved. Saline or colloid-containing fluids should be administered when there is hypotension or a decreased circulating extravascular volume. Heparin may be of value in DIC. Prompt therapy will significantly alter morbidity and mortality.

Summary

Although other rickettsial disorders are sporadic, RMSF is becoming more frequent. It is important to recognize this disease because it is treatable, and delay in recognition can result in significant morbidity and mortality. The physician must rely on the clinical characteristics of this illness if he is to prevent and arrest toxic manifestations.

A list of references may be obtained by writing The Journal.

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Special Article

Psychiatric Evaluation: The Mental Status Exam

David J. Withersty, M. D.

With the advent of the new West Virginia procedures for commitment (effective July 1, 1974), community mental health agencies will begin to take a more prominent role in the evaluation and disposition of psychiatric patients.

The increased awareness of the number of patients with behavioral and emotional problems within the community may necessitate increased contact with psychiatric patients by physicians who previously have had minimal involvement in this area. The mental status examination remains the most valuable tool for evaluation of organic versus functional disorders, and it is the purpose of this paper to review the mental status examination which can be performed within a short period of time and the significance of the findings.

The mental status examination serves two functions. Primarily, it is used to differentiate between aberrant behavioral patterns that are of an organic etiology versus those resulting from a functional origin. Secondarily, it is a means of standardizing and recording data which may be referred to at future dates. While the significance of specific findings on the mental status examination will be discussed in this article, it should be noted that no single item in the mental status examination is diagnostic in and of itself. Certain items should raise red warning flags to the evaluating physician that organicity may be present but these eventually should be coupled with a complete history, physical examination and other appropriate tests.

Organic Versus Non-organic Psychoses

Patients are described as psychotic when their mental functioning is sufficiently impaired to interfere grossly with their capacity to meet the ordinary demands of life. Their testing of reality is poor. This may be due to physiological mechanisms. These would include senile and presenile dementias, withdrawal states or intoxication with alcohol or drugs, intracranial infectious processes, cerebrovascular disturbances, brain tumors or trauma. Certainly a variety of endocrine and metabolic disturbances can present with psychotic behavior.

The Author

- **David J. Withersty, M. D., Assistant Professor and Director, Inpatient Service, Department of Behavioral Medicine and Psychiatry, West Virginia University Hospital, Morgantown.**

Schizophrenia, manic-depressive psychoses and involutional melancholia are usually categorized as non-organic psychotic states.

Evaluation: The mental status examination may be looked upon as occurring simultaneously in two phases: The evaluator is observing at the same time that he is interviewing.

Observable Behavior

The patient should be observed for general appearance. This must be taken in context with the person's social-economic status and activity at the time he is being observed. Certainly blue jeans and a tattered shirt are appropriate dress for the adolescent at play but raise questions when found as the attire of a business executive who reports for work dressed in a similar style. Also, under general behavior the individual's activity and conduct should be noted with special reference as to the amount of activity, the speed with which it is conducted, and whether or not the activity changes rapidly. If possible, one should attempt to determine if the behavior noted is a change for the individual and how rapidly it has occurred, i.e. over the past several days, weeks or months.

As with general behavior the stream of conversation can be noted without any specific questions being asked. It should be noted whether or not the talk is excessive in quantity. It should be observed whether or not the conversation is spontaneous, relevant or coherent.

The mood or affect of the individual being examined should be observed and recorded as such: The patient looks depressed or the patient looks inappropriately happy. Labile or shallow affects are not uncommon in organic psychotic states but are certainly not exclusive to this category.

It should likewise be noted in the patient's conversation whether or not any topics constantly reoccur. Examples of this might be somatic complaints or perhaps unrealistic fears such as a fear of cancer or unfounded suspicions.

Each of the above mentioned areas may be altered in a psychotic state that is the result of either an organic or a functional disturbance. Other than aiding in making a diagnosis they are of minimal value in differentiating between organicity and non-organicity.

Interview Areas

The patient undergoing evaluation may be told that he appears "tense" and that the questions that will be asked of him are asked in order to determine the reasons for his "tense" state. He may be told that the questions might sound rather "ridiculous" but that they are important. It is rare that the non-combative, non-agitated psychotic patient will refuse to cooperate if rapport is established with him.

Specific questions must be asked about hallucinations and thoughts of suicide. One might say: "Some people, when they become somewhat tense, see things and hear things that other people around them cannot see or hear. Has this happened to you?" One also must specifically ask about suicide. "Some people, when they become tense and feel blue, think about killing themselves. Have you found yourself thinking about suicide?" It should be emphasized that while there is no evidence in the literature to suggest that asking about suicide has put thoughts of self-destruction into a person's mind, many individuals who have unsuccessfully attempted suicide have reported afterwards that they had wished to discuss their problems with someone but found it difficult to make the first move.

Hallucinations and suicidal ruminations are seen in both organic and non-organic psychotic states. Tactile hallucinations are reported to be more characteristic of organic (usually toxic) psychoses.

One should specifically ask the individual if he knows the hour of the day, the day of the week, and the date including month, day and year. He should be asked specifically if he knows where he is. If the individual has not identified himself by name he should be asked to do so. It is a common mistake to allow the patient to simply answer in the affirmative that he is aware of his location or that he is aware of the date and not to press the individual in this matter. Some have been misled by not pressing the point and have neglected to note that the patient under observation was disoriented. Disorientation as to time, to place or to person is a strong indication of organicity and that diagnosis should be maintained until specifically ruled out by further evaluation.

Memory also should be tested to include immediate, recent and remote recall. Immediate recall is tested by giving the patient three numbers and three objects to remember for a period of five minutes. The patient should be asked to repeat the three numbers and three objects to be certain that he has heard them. After a period of five minutes he is asked to repeat the numbers and objects and the data is recorded as follows: The patient could recall two of three numbers and three of three objects after five minutes.

Recent memory is tested by asking the patient to recall details of events which recently have occurred to him within the past several days. Remote memory is tested by requesting dates and details of events which have occurred months or years prior to the time of examination. Memory impairment is common in organic dysfunctional states. Recent and immediate recall are the two areas most commonly affected whereas remote memory may remain intact.

Finally, the patient is asked, "What do you think someone means when they say 'A bird in the hand is worth two in the bush'?" or any other proverb. An inability to abstract proverbs would tend to imply that the concrete thinking is probably due either to organicity or to schizophrenia.

Summary

A method of performing the mental status examination has been reviewed. It is intentionally brief and covers the areas of observable behaviors and areas requiring interview techniques. Emphasis has been placed on recognition of psychotic states secondary to an organic brain syndrome. The areas of concern are impairment of orientation and memory and labile or shallow affect. Impairment of intellectual functioning and of judgment also are consistent with the organic brain syndrome.

Recognition of psychotic states secondary to organic brain syndromes is important if proper treatment is to be initiated and commitment avoided whenever possible.

Some Reflections on Carcinoma of The Prostate at The West Virginia University Medical Center

Stanley J. Kandzari, M. D.; and D. Franklin Milam, M. D.

CARCINOMA of the prostate is the second most common cause of cancer death in the male patient. It has been estimated that prostate cancer kills about 18,000 men annually and that 50,000 new cases are found each year. The incidence of prostatic carcinoma increases after the age of 50 years, but is very rarely found in the patient under 50 years of age. The average age of patients with prostatic cancer in the West Virginia University Tumor Registry is 72 years. Most patients had regional or distant metastases at the time of admission.

A review of 242 patients with adenocarcinoma of the prostate at West Virginia University Medical Center allows three conclusions: (1) radical prostatectomy for localized disease resulted in frequent cures; (2) patients with regional or distant metastases should be treated by palliation only, and (3) that many patients developed a second primary tumor.

Seventeen per cent (40 patients) in this study had multiple primary tumors. Six patients had three primaries, one had seven, one had nine and the remaining 32 had two primary tumors.

The best way to diagnose carcinoma of the prostate is by rectal examination. Any suspicious nodule or induration of the prostate should be biopsied. Localized prostatic carcinoma is generally an incidental finding and produces no symptoms. When symptoms appear, the tumor has usually extended outside the prostate gland and is no longer curable. In such instances, one can resort to palliative radiation therapy using Co^{60}, estrogen, and/or orchiectomy.

The Veterans Administration Cooperative Study revealed that estrogen therapy at 1 mg./day dosage was the most effective therapy for decreasing deaths from prostatic cancer. Whenever the effects of orchiectomy or estrogens diminish, one can resort to the use of adrenalectomy, localized radiation therapy, radioactive p^{32}, or hypophysectomy for pain relief. Interstitial irradiation for carcinoma of the prostate with I^{125} or colloidal gold allows delivery of a greater dose (7,000 to 16,000 rads) with less side effects.

Table 1 lists patients surviving five years or more following their initial treatment. This does not include the total number of patients in the series; since only 54 patients have survived the full five-year period.

The Authors

- **Stanley J. Kandzari, M. D.; and D. Franklin Milam, M. D., Department of Surgery, Division of Urology, West Virginia University Medical Center, Morgantown.**

WEST VIRGINIA UNIVERSITY TUMOR REGISTRY

Carcinoma of the Prostate—Treatment and Survival

Initial Treatment	*Total Patients*	*Surviving 5 Years or More*	
		Alive	*Dead*
Radical Prostatectomy	6	3	3
Curative Radiation	4	3	1
Orchiectomy	15	10	5
Estrogen	4	3	1
Orchiectomy + Estrogen	19	8	11
All Other	6	4	2
TOTAL	54	31	23

TABLE 1

Age, general health and localized disease are to be considered when evaluating a patient for radical prostatectomy. If the patient is over 70 years of age, he will probably outlive his cancer and die of another disease.

Carcinoma of the prostate is the most common tumor found as an "incidental finding" at autopsy. Patients with prostatic carcinoma always have a good chance of having a second primary, and women married to men with prostate cancer have a greater incidence of developing cancer of the breast, cervix or ovary.

It has been suggested recently by Dr. John K. Lattimer, Professor of Urology at Columbia University College of Physicians and Surgeons, that there is evidence that the same virus-like material in prostate cancer tissue occurs also in the semen of men with prostate cancer. While this is only a suggestion and perhaps needs further investigation, it is known that women married to men with prostate cancer have a greater incidence of developing cancer of the breast, cervix and ovary.

Hopefully, with a large clinical series, the natural history of the disease will be better defined and thus provide a basis for improved treatment of patients with carcinoma of the prostate.

Medical Grand Rounds

From the West Virginia University Medical Center
Edited By
Raymond B. Weiss, M. D.
Assistant Professor of Medicine

Primary Empty Sella Syndrome

Patrick L. Brown, M. D., Medical Resident, West Virginina University Medical Center.

In clinical medical practice the demonstration of an enlarged sella turcica on skull radiographs is frequently equated with a pituitary tumor. Presented here is a case of a patient with an enlarged sella turcica and hypopituitarism, but in this instance the sella was "empty," rather than harboring a pituitary tumor.

Case Presentation

The patient is a 50-year-old white male who was referred to the West Virginia University Hospital for evaluation of an enlarged sella turcica. He was well until approximately 12 years prior to admission when he noted the onset of malaise and easy fatigability. Gradually he lost his body hair, his complexion became pale, and his face wrinkled. He had diminished libido and became impotent. He was seen by his physician at that time and started on 5 grains of desiccated thyroid daily which he took for approximately 10 years. During this time he continued to work although he was fatigued completely by a day's work. He had not experienced headaches, visual disturbances, nausea and vomiting, cold intolerance, or recent weight loss. He had had no change in shoe or ring size.

Physical examination revealed a large man who was alert and cooperative with normal vital signs. His forehead was quite prominent. Fundoscopic examination was normal. He had moderate hepatomegaly with the liver edge extending 8 cm. below the costal margin. There was no splenomegaly. His skin was dry and pale and his face was finely wrinkled (Figure 1). The testicles were atrophic and the prostate gland was small. The deep tendon reflexes had a prolonged relaxation phase. The remainder of the physical examination was normal.

Laboratory data (Table 1) confirmed hypothyroidism by a low serum thyroxin and low radioactive iodine uptake. Gonadal deficiency was proved by a low plasma testosterone and free testosterone index. Adrenocortical deficiency was only mild as one would have expected since acute adrenocortical insufficiency was not produced when he was started on 5 grains of thyroid per day. The 8 A.M. plasma cortisol was 8.4 mcg. per cent and the 11 P.M. plasma cortisol was 6.0 mcg. per cent. Pituitary insufficiency itself was proved by the short metyrapone test which showed no increase in compound S after administration of metyrapone.

A complete neurological examination was within normal limits. Visual field testing did not reveal any evidence of bitemporal hemianopsia. An electroencephalogram was mildly abnormal with diffuse irregularities, but no lateralizing changes. Skull x-rays revealed an enlarged sella turcica and frontal sinuses which were prominent, suggestive of acromegaly (Figure 2). Brain scan showed asymmetric uptake in the posterior fossa. No pleocytosis or increased protein was found in the spinal fluid.

After hypopituitarism had been established a pneumoencephalogram was done which clearly showed that the sella turcica was empty rather than filled by a mass (Figure 3). The air-filled sella turcica was in communication with the subarachnoid space. After the diagnosis of hypopituitarism with an empty sella turcica was confirmed, the patient was started on replacement therapy with hydrocortisone. Full maintenance dosages of methyl testosterone and thyroxin were achieved by means of gradually increasing dosages over several weeks. He developed no side effects of angina, increased nervousness, jaundice or alteration of mental status by using

this regimen of gradually increasing thyroxine and testosterone.

The patient was seen in the out-patient clinic two months after starting his hormone replacement and he had noted remarkable increase in energy and general well-being. His libido had increased, and his appetite had increased markedly with a resultant increase in weight of approximately 30 pounds.

Discussion

Before starting the discussion of primary empty sella syndrome, I would like to explain the metyrapone test which is used to evaluate pituitary reserve. Metyrapone is a drug which inhibits 11-β hydroxylase activity in the adrenal cortex. This 11-β hydroxylase is an enzyme required for the conversion of compound S(11-deoxycortisol) to cortisol. Cortisol has a negative feed-back to the pituitary gland, and thus by giving metyrapone which inhibits cortisol production, there is an increased production of ACTH by the pituitary gland. This increase in ACTH in normal patients causes an increase in compound S, but in patients with pituitary insufficiency the plasma compound S will not increase. In this patient the short metyrapone test was performed. He was given 2 gm. of metyrapone at 12 midnight and then a plasma compound S was obtained the next morning. His compound S then was 0.166 mg./100 ml.—which was very low and indicative of pituitary insufficiency.

The "empty sella syndrome" was first described in 1951 by Busch in an autopsy series in which he found that 40 of 788 patients without any evidence of pituitary disease had an absence of the diaphragma sella.

The "empty sella syndrome" means that the sella turcica has been shown by radiographic or surgical means to be empty. There are two types of empty sella syndromes—primary and secondary. Primary empty sella syndrome means no previous surgical or radiotherapeutic intervention has occurred to explain the empty sella. Secondary empty sella syndrome has been described by Colby and Kerns, who noted that some patients who had been treated for pituitary adenomas would later develop visual deterioration. It was felt that the etiology of the deterioration was scarring with subsequent retraction of the optic chiasm into the empty sella turcica. We will discuss only the primary empty sella syndrome (PESS) here.

Pathologically, when the sella turcicas of patients with PESS have been examined either at surgery or postmortem, the findings have been the loss of the diaphragma sella and flattening of the pituitary gland against the floor of the sella turcica. It is important to note that at autopsy 10 per cent of the normal population will show thinning of the diaphragma sella, but only rarely does clinical disease result from it.

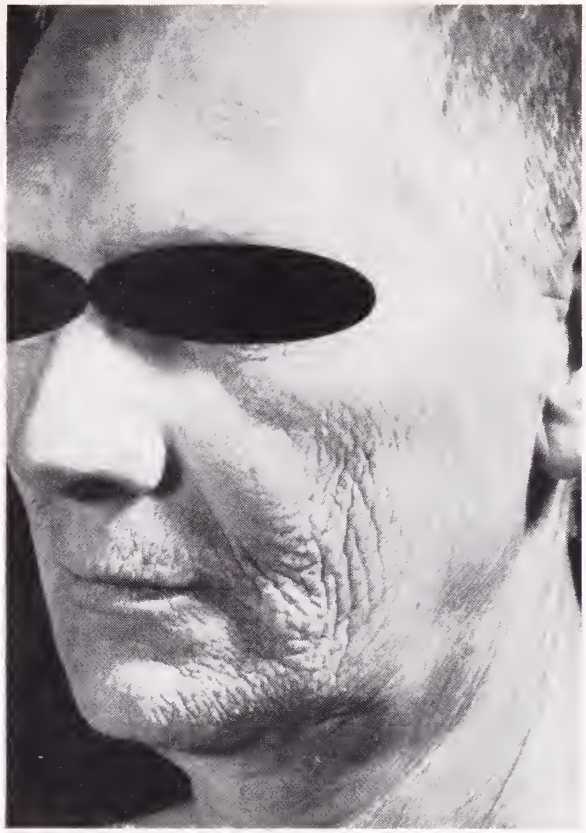

Figure 1. A view of the patient's face showing the finely-wrinkled skin which is characteristic of gonadal deficiency. In this case it was due to hypopituitarism and low secretion of gonadotropins.

There are several causes postulated for the empty sella syndrome. Some feel that it may be caused by rupture of intrasellar cysts into the subarachnoid space, but this explanation is unlikely since most cases of intrasellar cysts create hormonal or visual disturbances; PESS usually causes no hormonal or visual disturbances. Another possible cause could be infarction of the pituitary gland and resultant atrophy, but again this is unlikely because infarction would most likely cause endocrine dysfunction with a greater frequency than is described in the classical PESS.

A third possible explanation could be pituitary hypertrophy followed by atrophy, as might be seen when the pituitary gland becomes hypertrophied with primary end-organ failure, such as primary hypothyroidism and then atrophies,

Figure 2. Lateral view of the skull showing the enlarged sella turcica. The posterior clinoid processes are intact and there is posterior "bowing" of the dorsum sellae.

when therapeutic replacement therapy is instituted. This explanation, again, probably is not valid because most of the patients with PESS do not have an antecedent endocrine disease.

The most likely cause for this syndrome is that cerebrospinal fluid (CSF) pressure, whether normal or elevated, is transmitted through a congenitally inadequate (thinned) diaphragma sella with resultant bulging of the sub-arachnoid space into the sella turcica with compression of the pituitary gland. Factors which are known to elevate CSF pressure are obesity, hypertension and congestive heart failure.

Clinically, this syndrome appears to be more common in middle-aged women and frequently is associated with obesity. Headache is found in most patients with PESS but it really is non-descriptive and generally not suggestive of the diagnosis. Visual field abnormalities are distinctly uncommon, and if any evidence of bitemporal hemianopsia is found, it should deter one from making the diagnosis of PESS. The diagnosis of PESS does not require an enlarged sella turcica, but in the majority of cases the sella is enlarged. The diagnosis of PESS requires only that an empty, air-filled sella turcica be demonstrated by pneumoencephalogram or at surgery.

Most studies in the literature have emphasized the fact that hypopituitarism is a very uncommon finding in patients with PESS. In a study from Duke University of 31 patients with PESS, one patient had panhypopituitarism and one patient had acromegaly. In addition four other patients were thought to have partial hypopituitarism, as shown by provocative tests such as growth hormone response to insulin-induced hypoglycemia. In at least two-thirds of the patients, the endocrine function was entirely normal.

Probably the most significant symptom suggestive of PESS is rhinorrhea. At least nine cases of CSF rhinorrhea have been reported in association with PESS. This condition should be included in the differential diagnosis of rhinorrhea. The treatment of rhinorrhea secondary to PESS by packing of the sella turcica is usually successful.

The most common presentation of patients with PESS is an enlarged sella found on routine skull x-ray for an unrelated condition—often the evaluation of headaches. Radiographically, PESS usually does have an enlarged sella, but typically there are fewer destructive changes in the body configuration than are found in the instance of pituitary tumors. The classical empty sella syndrome shows a "symmetrical ballooning" with maintenance of the closed configuration of the sella turcica.

The major importance of this syndrome is that it is a benign, usually asymptomatic lesion that can be confused with a pituitary tumor. For this reason anyone who has an enlarged sella turcica should have a pneumoencephalogram to rule out PESS before institution of any surgical or radiation therapy.

In conclusion, a middle-aged white male presented with PESS who had panhypopituitarism which is a distinctly uncommon finding in PESS. Hormone replacement therapy was instituted and a gratifying clinical improvement was obtained.

A Physician: Was any evidence of posterior pituitary insufficiency found and would one expect any?

Paul E. Steffes, M. D., Assistant Professor of Medicine, Division of Endocrinology.

Clinically, there was no suggestion of posterior pituitary insufficiency (diabetes insipidus) in that the serum sodium was not high and no polyuria was seen. I would think that since anterior pituitary failure is only rarely seen in the empty sella syndrome, and since posterior pituitary failure only rarely accompanies anterior pituitary failure in expanding lesions of the sella, that one would not expect to find diabetes insipidus with any great frequency in the empty sella syndrome. I do think it is important to

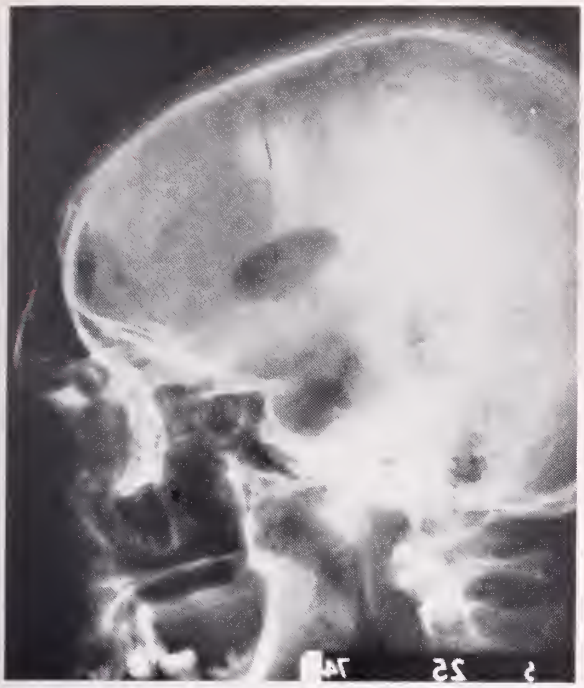

Figure 3. The brow-up view of the pneumoencephalogram demonstrates extension of an enlarged subarachnoid space through the diaphragma sella into an enlarged sella turcica. This excludes a mass lesion and presumably there is only a remnant of pituitary tissue.

note, however, that the presence of adrenal insufficiency could clinically mask the presence of diabetes insipidus. A cortisol-deficient individual has decreased ability to clear a free water load, whereas an antidiuretic hormone-deficient individual has actually an increased ability to clear free water load (the patient cannot concentrate his urine). Thus, the two abnormalities of free water clearance tend to cancel one another and diabetes insipidus in the ACTH-deficient pituitary patient may be masked until cortisol replacement is begun.

I would like to reinforce a point that Doctor Brown made during his presentation concerning treatment in this individual with desiccated thyroid. Treatment of the ACTH-deficient, as well as thyroid-deficient, patient with pituitary disease with thyroid alone will increase the metabolic need for cortisol. This increased need may actually exceed the ability of a deficient pituitary to secrete ACTH and thus adrenal failure may be precipitated. Hence someone who becomes, not better, but worse, on thyroid replacement may well have not primary hypothyroidism, but pituitary insufficiency (panhypopituitarism). Since it is certainly risky to look for a negative response to thyroid refeeding in a hypothyroid subject to make the differential diagnosis between primary and secondary thyroid failure, the lesson here is that all patients, once identified as hypothyroid, should be further examined to determine the cause of the hypothyroidism.

In the clearly hypothyroid patient a single determination of serum thyroid-stimulating hormone (TSH) by radioimmunoassay (available at many clinical laboratories) is sufficient to differentiate whether the hypothyroidism is primary or secondary to hypopituitarism. The value is high in primary hypothyroidism and either normal or low in secondary hypothyroidism. In the patient not clearly hypothyroid, a single TSH value is of no help because unfortunately the assay is unable to detect differences between normal and low values of TSH, as would be expected in normal and hypopituitary patients, respectively. Obviously, all hypopituitary patients should be started on cortisol replacement before thyroid replacement.

Suggested Reading

1. Neelon, F. A., Goree, J. A., Leboritz, H. E.: The Primary Empty Sella: Clinical and Radiographic Characteristics and Endocrine Function. Medicine 52:73-92, 1973.
2. Papa, I., Gioronelli, M. A., Bernasconi, V.: Primary Empty Sella. J. Neurosurg. 36:157-161, 1972.

TABLE I

Presented Patient's Endocrine Evaluation

(Normal Values in Parentheses)

1. Thyroid Gland
   a. Radioactive iodine uptake 0.6% (25-35)
   b. Thyroxin 2.4 mcg% (4.1-11.2)
2. Testes
   a. Serum testosterone 13 nanograms % (300-1000)
   b. Free testosterone index 2.1 (200-500)
3. Adrenal Gland
   a. Plasma cortisols
      8 a.m. 8.4 mcg% (15-30)
      11 p.m. 6.0 mcg% (one-half morning value)
4. Pituitary Gland
   a. Short metyrapone test
      8 a.m. plasma cortisol 3.7 mcg%
      8 a.m. Compound S 0.16 mcg% (10-30)
   b. Serum F S H 8 IU/ml (4-25)

IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL* IS NOT *AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria and paralytic ileus.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d., 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils, tachycardia and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. Use a narcotic antagonist in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid,* 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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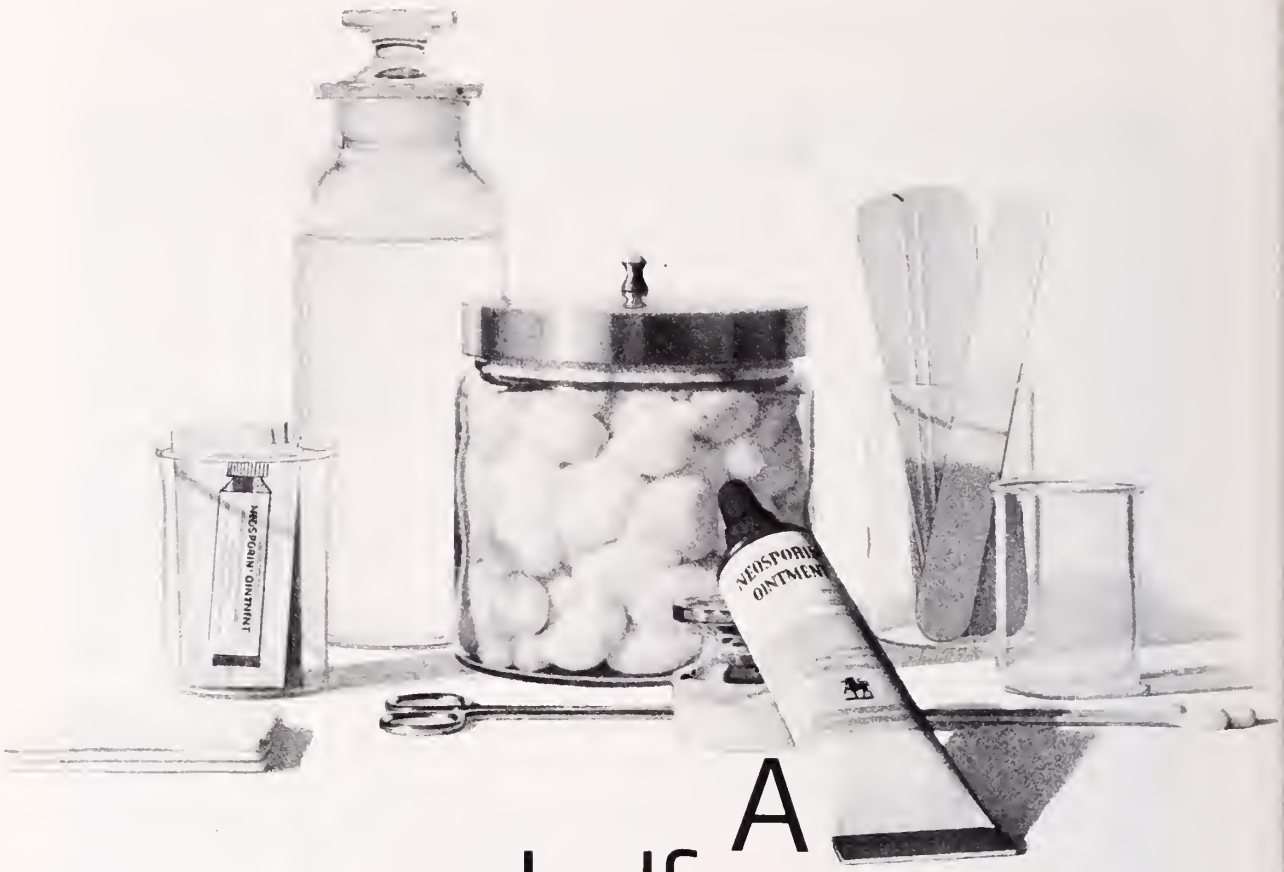

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INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.
Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

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WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

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Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

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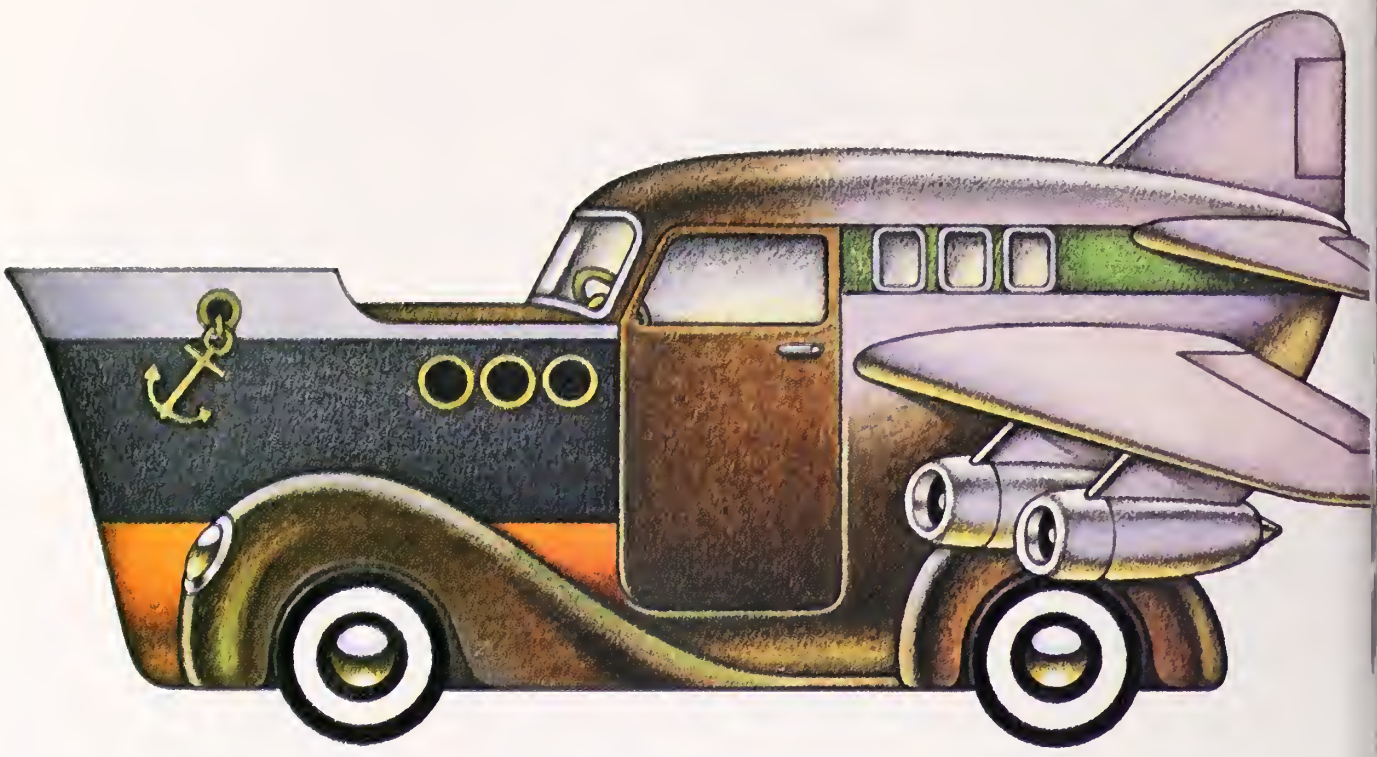

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It is therefore only natural that optimum health care demands the input from many services and disciplines; hence, the *health care team.* Epochal advances of the past 30 years in medical technology require *the team.* Communication between *team members* must be open and welcomed for the ultimate benefit of the patient.

A liaison committee of the West Virginia Hospital Association and the West Virginia State Medical Association is the "new kid on the street." Key figures from both associations man the committee to provide a ready forum for the mutual concerns of hospital administration and professional medical care.

In the face of all this *team* effort, there are ill winds, politically known and unknown, that would drive us apart. The ruse would appear to be economic necessity. Nevertheless, it is vital that the engineer, administrator, dietician, chaplain, nurse, technologist, secretary, aide, transcriptionist, housekeeper and physician work together, and work *harmoniously.* Only by fixing our over-riding attentions upon the *patient* can we provide optimum health care. All other aspects of health care, economic and social, will then assume their proper and rightful perspective.

The *patient*: first, last and always!

Bill Gilmore

William E. Gilmore, M. D., *President*

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EDITORIALS

THE AGING GASTROINTESTINAL TRACT

A recent communication in the *Journal of the American Medical Association*[1] by Dr. Archambault calls attention to the ineffective absorption of riboflavin from the gastrointestinal tract in old people. He observed that in treating an aging patient suffering from cheilosis that oral administration of riboflavin apparently had no effect on the lesion. However, when the above mentioned therapeutic agent was given intramuscularly it was quite effective. He made similar observations on several other aging patients and concluded that the aging gastrointestinal tract was presumably associated with defective absorption.

The observer stated further that no one has ever been concerned with the aging process of the gastrointestinal tract, and the concomitant lack of absorption from it. His criticism has merit and so far as the author of this editorial is aware but few studies have been made on aging and gastrointestinal tract absorption. Considerable work, however, has been reported on secretions of the gastrointestinal tract in aging human beings. For example, Meyer and Necheles[2] reported in 1940 that no free acid was found in the fasting stomachs of 65 per cent of 29 patients over 60 years of age. They reported further that salivary, gastric and pancreatic secretions were reduced in amount and content of enzymes, except that of pancreatic amylase. Some work has been reported also on the motility of the gastrointestinal tract in old people. In 1941 Van Liere and Northup[3] observed that the gastric emptying time of 12 men, who ranged in age from 58 to 84 years and whose average age was 70.8 years, did not vary statistically from data obtained on 59 young men whose average age was about 23 years.

It is obvious that these last named studies shed some light on the functioning of the gastrointestinal tract in aging people, but it is equally obvious that much more work is needed in this field. The same is true for many other areas in geriatrics. More and more people are living longer and these oldsters deserve more medical attention than they have received in the past. Careful clinical observations and well-controlled researches concerning geriatric problems should eventually be of distinct help to those fortunate people who are enjoying a long life span.

1. Archambault, R. J. J.A.M.A. 230: 960, 1974.
2. Meyer, J. and H. Necheles. J.A.M.A. 115: 2050, 1940.
3. Van Liere, E. J. and D. W. Northup, Am. J. Physiol. 134: 719, 1941.

CANCER OF THE PROSTATE

Elsewhere in this issue of *The Journal* appears a timely article on cancer of the prostate. The danger of this condition has been recognized for many years. Presently it is the second most common malignant tumor found in man. It rarely occurs in patients under 50 years, but after this age the incidence of prostate cancer greatly increases. The etiology is unknown; the histology is generally adenocarcinoma. As a rule the serum phosphatase is increased, especially if metastases occur.

Radical treatment for localized lesions often results in frequent cures. Unfortunately, many patients when first seen by their physician have regional metastases. The article points out the possible forms of therapy if the latter have occurred. So far as performing a radical prostatectomy is concerned, several factors must be considered; among them are age, general health and localized disease. If a patient is over 70 years of age, probably no operation should be done, since the chances are that he will outlive his cancer and die from some other condition.

Doctors Kandzari and Milam in their article point out the suggestions recently made by Dr. John K. Lattimer, namely that the same virus-like material in prostate cancer tissue also may occur in the semen of men with prostate cancer. There is some evidence that women married to men with prostate cancer have a greater incidence of cancer of the breast, cervix or ovary. This important observation surely needs thorough investigation.

While some patients with cancer of the prostate live for a long time following estrogen therapy or orchiectomy, cancer of the prostate must be considered a treacherous disease and every effort should be made to detect it early while it is still removable. On this account a careful rectal examination should be made periodically on men, especially those past 50 years of age. In the final analysis, this could be a life saving procedure.

Our Readers Speak

'THANATOLOGY'

I was disappointed with the editorial on "Thanatology?" that was in the December, 1974 issue of *The West Virginia Medical Journal.*

It seems to me that the editorial writer is more intent on using the editorial page of *The Journal* to stir up hatred and invective than he is in his avowed purpose of bringing the opposition to abortion into the open. Do you help resolve any controversial issue by calling the opposition names? Do you help resolve a controversial issue by assuming an attitude that everyone that differs is wrong? To me this smells of a recent national political situation we would just as soon forget.

I know many doctors who perform abortions. They are honest persons. They are not doing anything illegally. Morally and ethically they are following the dictates of their conscience. To call them abortionists, as the editorial writer does, is a slur. They are doctors. By the same token I would not call a doctor who gives electric shock treatment an electroshockist or a doctor who does surgery a butcher.

The editorial writer says "It is not easy for doctors who have dedicated their lives to saving and preserving life to become executioners." Can the editorial writer substantiate that any doctor is forced legally, morally or ethically to perform an abortion. On the other hand any doctor that wants to dissociate himself from an institution whose members approve or perform abortions is free to do so.

It may be that the editorial writer is correct. Maybe abortion is wrong. By tact, tolerance, the mutual expression of ideas of those that oppose and those that approve of abortion a sound policy regarding abortion may eventually be adopted. Let us search together for what we think is the truth in a mature way without resort to maligning our colleagues. If ever there was a time for leadership and cooperation it is now. Let us not polarize. Let us not use the editorial pages of *The Journal* to divide us but to unite us.

David H. Smith, M. D.
The Wheeling Clinic
Wheeling, W. Va. 26003

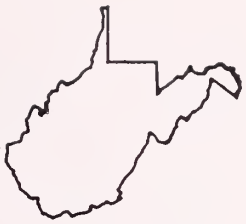
The above letter was referred to the author of the editorial in question, who offers the following reply:

It appears that Doctor Smith objects to the tone of the editorial and the language used rather than the content. Rather than merely reflecting bias, the language used in THANATOLOGY was deliberately chosen to illustrate and reflect the depth of feeling currently held by, at the very least, a very significant percentage of practicing physicians. Other less pejorative language could have been used. The subject might even have been dealt with in appropriate language in the news section of *The Journal.*

On the editorial page, however, such blandness might have the effect of a piano concerto played with one finger. Rather than a cause, the editorial is an effect of polarization of the abortion issue. To hold otherwise is equivalent to damning the manufacturer of the thermometer when it records a fever of 105 degrees.

Surely Doctor Smith, who lists himself as a psychiatrist, can appreciate the value of recognizing and responding to reality. To follow Doctor Smith's advice would be to duck the most important part of the dispute—its very depth and virulence.—SDW.

GENERAL NEWS



Two Prominent Speakers Selected For 108th Annual Meeting

Dr. Philip M. Sprinkle of Morgantown, Chairman of the Program Committee, has announced that Dr. Ariel C. Hollinshead of Washington, D. C., and Dr. Charles A. White, Jr., of Morgantown have accepted invitations to present papers during the 108th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 20-23, 1975.

Dr. Ariel C. Hollinshead

Charles A. White, M. D.

Doctor Hollinshead will speak at the first general scientific session on Thursday morning, August 21, which will be devoted to a "Symposium on New Concepts in Cancer Diagnosis and Therapy."

Doctor White will present a paper at the second general scientific session on Friday morning, August 22. It also is anticipated that both physicians will be invited to speak before separate meetings of sections and affiliated societies.

Ariel C. Hollinshead, Ph. D.

Dr. Ariel C. Hollinshead, Professor of Medicine at the Laboratory for Virus and Cancer Research at the George Washington University Department of Medicine, received degrees from Swarthmore College, Ohio University and George Washington Medical Center. She received her Ph. D. degree in Pharmacology from the George Washington Medical Center in 1957 and served as a Postdoctoral Fellow in Pharmacology at the same institution. She served as Assistant Professor and Fellow in Virology and Epidemiology from 1958 to 1959 at the Baylor University School of Medicine, at which time she joined the faculty at George Washington University. She was named to her present position in 1974.

She is a life member of the American Association for the Advancement of Science and the New York Academy of Sciences, and also is a Past President of Sigma Delta Epsilon (Women's Scientific Honorary).

Doctor Hollinshead is the author or co-author of a number of scientific articles and has served as a reviewer for *The New England Journal of Medicine* and several other scientific journals. She also has lectured extensively in this country and abroad.

Charles A. White, Jr., M. D.

Dr. Charles A. White, Jr., who is Professor and Chairman of the Department of Obstetrics and Gynecology at the West Virginia University School of Medicine, is a native of San Diego, California.

He attended San Francisco State College and the University of California at Davis. After a year of service in the Army, he entered Colorado State University where he received a D. V. M. degree in 1945. He spent six years in the private practice of veterinary medicine before attending the University of Utah where he received his M. D. degree in 1955.

Doctor White interned at Salt Lake County General Hospital and served a one-year residency in his specialty at Dee Memorial Hospital in Ogden, Utah. He served for two years with the Medical Corps of the United States Navy and then completed his residency in obstetrics and gynecology at the University of Iowa Hospital. He served as a member of the faculty at Iowa from 1961 until he accepted his present position at WVU in 1974.

The author or co-author of a number of scientific publications, Doctor White has been an examiner since 1971 for the American Board of Obstetrics and Gynecology from which he received certification in 1964.

Doctor Parrott Honor Guest At Meeting

It was announced previously that Dr. Max H. Parrott of Portland, Oregon, had accepted an invitation to speak at the first session of the House of Delegates on Wednesday afternoon, August 20. Dr. Parrott will be installed as President of the American Medical Association during the annual meeting at Atlantic City in June.

Three General Scientific Sessions

Doctor Sprinkle announced there will be three general scientific sessions on Thursday, Friday and Saturday mornings and that it is hoped most of the sections and affiliated societies will schedule breakfast meetings to enable everybody to enjoy the recreational facilities available at The Greenbrier during the afternoon hours.

Serving with Doctor Sprinkle on the Program Committee are Drs. R. J. Bailey of Parkersburg, Fernando G. Giustini of Wheeling, Robert D. Hess of Bridgeport, Jack Leckie of Huntington and Joseph T. Skaggs of Charleston.

Mid-Winter Clinical Conference Registration Totals 226

Registration for the Eighth Mid-Winter Clinical Conference held January 24-26 in Charleston totaled 226—not including still another estimated 200 lay people who attended the Friday night public session. The Conference this year attracted 162 practicing physicians, in contrast to 154 in 1974.

Physicians and others gathered at the Daniel Boone Hotel for the three-day Conference to hear 16 speakers, including five from out-of-state, present scientific papers on a variety of topics—including heart, vascular and pulmonary diseases, and cancer.

The Friday night public session, initiated in 1974, this year included the public session on "The Problems of Adolescents" with a concurrent session for physicians on PRSO. Almost 100 physicians attended the latter session. The public program was sponsored and promoted by the Woman's Auxiliary to the Kanawha Medical Society.

In addition to the 162 practicing physicians, this year's registration included 11 residents, one intern, two medical students, 31 nurses, one physician's assistant, and 18 other health-related personnel.

Drs. Ralph H. Nestmann and Joseph T. Skaggs, of Charleston, Conference Co-Chairmen, observed that this year's new schedule of beginning at noon on Friday and concluding at noon on Sunday appeared to be popular with participants. A departure from the clinical format which also appeared to be well received was the address by Mr. Stanley E. Preiser, Charleston attorney, on the topic of "How to Avoid Malpractice Suits." The annual dinner dance of the Kanawha Medical Society on Saturday night continued to be an attraction as many of the Conference participants and their spouses attended the social event.

The Mid-Winter Clinical Conference, which began eight years ago as a small conference on chest diseases, has grown rapidly as a major continuing medical education event for the State's practicing physicians. Sponsored by the State Medical Association and 12 other State medical organizations and volunteer health agencies for 1975, it was moved to the Daniel Boone this year to accommodate the growing attendance.

Also serving on the Program Committee with Drs. Nestmann and Skaggs are Drs. C. Carl Tully of South Charleston and William O. McMillan, Jr., Charleston.

The Conference was approved for 12 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association—and for 12 hours of Prescribed Credit by the American Academy of Family Physicians.

The speakers at the session on heart disease-emergency care which opened the Eighth Mid-Winter Clinical Conference in Charleston, January 24-26, are shown in the left photo. They are, from left, seated, Drs. Stafford G. Warren and Nancy Wanderman of Charleston, and Richard S. Crampton, University of Virginia School of Medicine; standing, Drs. William H. Carter, left, Charleston; and John W. Traubert, Morgantown, Moderator. In the center photo, Dr. Lewis C. Richmond, Jr. of Milton watches as Betty Jo Rinehart, R. N., a volunteer for the West Virginia Affiliate, American Heart Association, gives a cardiopulmonary resuscitation demonstration on a training mannequin as part of an exhibit sponsored during the Conference by the CPR Committee of the Heart Association. On the right are two of the physicians who attended the Conference, Drs. Robert D. Hess of Bridgeport, left, and Pat A. Tuckwiller of Charleston.

Speaking at the Friday evening public session on "The Problems of Adolescents" during the Eighth Mid-Winter Clinical Conference were, in the left photo, from left, Drs. U. G. Turner, III, University of Virginia School of Medicine; James M. Stevenson and Ralph S. Smith, Jr., both of Charleston, and Thomas G. Potterfield, Charleston, Moderator. In the center are Drs. Daniel Upthegrove, Charleston, left, who spoke at the medically-oriented session on "The Problems of Adolescents" Saturday morning, and W. Gene Klingberg, Morgantown, Moderator. Shown on the right are, from left, Drs. William O. McMillan, Jr., Charleston, a member of the Conference Program Committee; and two of the speakers at the Sunday morning session, Raymond H. Bunshaw, Atlanta, who spoke on cancer; and C. E. Buckley, III, Duke University Medical Center, whose topic was adolescent pulmonary disease.

WVU Co-Sponsor For PG Course On Lung Disease, April 2-4

The West Virginia University School of Medicine will be a Co-Sponsor with the American College of Chest Physicians and the National Institute for Occupational Safety and Health for a postgraduate course on "Occupational Lung Disease," April 2-4. The course will be held at the Lakeview Country Club Conference Center in Morgantown.

W. Keith C. Morgan, M. D.

Dr. W. Keith C. Morgan, Professor of Medicine and Chief, Division of Pulmonary Medicine at WVU, will be the course Director.

The relevant and recent advances in the detection, monitoring and treatment of chronic and acute occupational lung diseases will be the topic of the course. The epidemiology of industrial lung disease —what tests to do, how often and to what purpose—also will be discussed. Other topics will include the early detection of occupational respiratory disease and its effect on prognosis, immunologic aspects of occupational lung disease, occupational asthma and industrial bronchitis; and the monitoring of respiratory status of industrial groups.

In addition to Doctor Morgan, other WVU speakers during the three-day course will be Drs. Robert Burrell, Professor of Microbiology; Brian Davies, Instructor of Medicine; Milton Hales, Professor and Chairman of Pathology; N. Leroy Lapp, Associate Professor of Medicine and Chief, Medical Research Section, Appalachian Laboratory for Occupational Respiratory Diseases (ALFORD); and Mr. Robert Reger, Chief Statistician, ALFORD.

Members of the Visiting Faculty will be Drs. Margaret R. Becklake, Professor of Epidemiology and Public Health, McGill University, Montreal, Quebec, Canada; Benjamin Ferris, Professor of Environmental Medicine, School of Public Health, Harvard Medical School; Ian T. T. Higgins, Professor of Epidemiology, School of Public Health, University of Michigan; and Hans Weill, Professor of Medicine, Tulane University School of Medicine, New Orleans.

The course is approved for 14-and-one-half credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association. Registration fees will be $100 for ACCP members, $125 for non-members, and $50 for residents. For further information contact Bradford W. Claxton, M. Ed., Associate Executive Director, American College of Chest Physicians, 911 Busse Highway, Park Ridge, Illinois 60068.

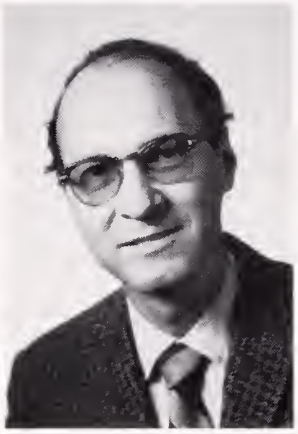
West Virginia Chapter, AAFP A Conference Sponsor

The West Virginia Chapter, American Academy of Family Physicians, inadvertently was omitted from the list of sponsors appearing on the printed program for the Eighth Mid-Winter Clinical Conference, held in Charleston at the Daniel Boone Hotel, January 24-26. The Conference Program Committee regrets this error.

In addition talks will be given by the residents staff and the audiology and research staffs of the division.

Dr. Lapp Named To New WVU Post For Continuing Education

An associate professor in the Division of Pulmonary Medicine has been appointed to the newly-created position of Assistant Dean for Continuing Education in the West Virginia University School of Medicine.



N. Leroy Lapp, M. D.

In this post, Dr. N. Leroy Lapp will have the responsibility of coordinating efforts toward development and accreditation of courses for practicing physicians.

"We have the responsibility to provide continuing education for the doctors in this state and are endeavoring to develop the budget support to allow us to meet this responsibility," said Dr. John E. Jones, Dean of the School of Medicine.

Doctor Jones added that Doctor Lapp, "a seasoned and experienced clinician in pulmonary medicine," will continue his teaching and research within the Department of Medicine.

Periodic seminars, symposiums and teaching days, many carrying continuing education credit or accreditation toward specialty board requirements, have been sponsored previously by various departments within the School of Medicine.

Coordination of such efforts and addition of other courses into a comprehensive curriculum to keep physicians in touch with the latest developments in their various fields will be the aim of the new program.

Doctor Lapp resigned in January as Chief of the Cardiopulmonary Unit at the Appalachian Laboratory for Occupational Respiratory Diseases (ALFORD). He has held a faculty position in the WVU School of Medicine jointly with his ALFORD appointment since he came to Morgantown in 1966.

The 42-year-old native of Perkasie, Pennsylvania is a graduate of Eastern Mennonite College in Harrisonburg, Virginia, and received his M. D. degree from Temple University in Philadelphia.

His postgraduate training in internal medicine and pulmonary medicine was obtained at St. Luke's Hospital in Bethlehem, Pennsylvania, and at the Mayo Graduate School of Medicine in Rochester, Minnesota.

A Fellow of the American College of Physicians, he also is a member of the American Thoracic Society and the American Association for Advancement of Science and is the author or co-author of a number of scientific publications describing pulmonary research.

Correction

In the January issue of *The Journal*, in the *County Societies* Department, Dr. Edward M. Spencer was listed as Vice President of the Mercer County Medical Society for 1975. The name should have been Dr. T. Keith Edwards. *The Journal* regrets this error.

In the left photo are the speakers for the session on cerebral vascular disease and diabetes held during the Eighth Mid-Winter Clinical Conference in Charleston, January 24-26. They are, from left, Drs. Arthur L. Poffenbarger, Charleston; Hartwell G. Thompson, Jr., Charleston, the Moderator; G. Robert Nugent, Morgantown; and Harvey C. Knowles, Jr., University of Cincinnati College of Medicine. In the center photo, Dr. C. A. Hoffman, Huntington, right, talks with Stanley E. Preiser, Charleston attorney, who discussed malpractice at the Sunday morning session. Shown on the right prior to the Friday night session on PSRO are, from left, Drs. Harry S. Weeks, Jr., Wheeling, President of the West Virginia Medical Institute, Inc.; and the speakers, James C. Respess, University of Virginia Hospital; and William C. Felch, Rye, New York.

New officers of the Kanawha Medical Society were installed in January during the Society's annual dinner dance at the Daniel Boone Hotel in Charleston. From left, are Drs. Joseph T. Skaggs of Charleston, Vice President; George A. Shawkey, Charleston, President; William E. Gilmore, Parkersburg, President of the State Medical Association, who installed the new officers; and Richard C. Rashid, South Charleston, Secretary-Treasurer.

Oph.-Otol. Academy Spring Meeting At The Greenbrier, April 27-30

Eugene M. Helveston, M. D.

Robert W. Cantrell, M. D.

The National Spring Meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held April 27-30 at The Greenbrier in White Sulphur Springs.

Five speakers will appear on the Ophthalmology Program. They are Drs. Jorge N. Buxton, New York City; Eugene M. Helveston, Indianapolis, Indiana; Norman Sanders, Hallandale, Florida; David Shoch, Chicago; and Richard C. Troutman, New York City.

Topics will include "Use of Thin Conjunctival Flaps," "Beta Radiation," "Early Fitting of Conventional Contact Lenses After Intracapsular Extraction," "Unusual Cases of Anterior Segment Pathology," "Classification, Diagnosis and Management of Strabismus with Mechanical Restriction,"

"Practical Management of Amblyopia," "Carcinoma In Situ of the Conjunctiva and Cornea," "Treatment with Lamellar Surgery—Techniquqes," "Therapeutic Soft Contact Lenses—The Indication and Fitting Techniques," "Asymmetric Thyroid Ophthalmology," "Exenteration of the Orbit," "The Correction of Astigmatic and Ametropic Errors Following Cataract Surgery;" and "Intracapsular or Extracapsular Extraction—Results and Critique."

Appearing on the Otolaryngology Program will be Drs. Robert W. Cantrell, San Diego, California; Walter E. Berman, Beverly Hills, California; Vincent Hymans, Washington, D. C.; and John J. Shea, Memphis, Tennessee.

The topics will include "Medical and Surgical Treatment of Otosclerosis," "The Surgical Managements of Congenital Cysts and Fistulae of the Head and Neck," "Concepts of Rhinoplastic and Nasal Septal Surgery," "Epithelial Atypias of the Mucosa of the Larynx and their Clinical Significance," "Olfactory Neural Tumors;"

"Intact Canal Wall Tympanoplasty," "Eyelid and Facelift Surgery," "The Pathophysiological Effects of Noise," "Adenomatous Neoplasms Primary in the Middle Ear," "Fractures of the Frontal Sinus;" and "The Medical and Surgical Treatment of Fluctuant Hearing Loss."

Reservations should be made directly with The Greenbrier. Checks for the registration fee of $125 should be made payable to The West Virginia Academy of Ophthalmology and Otolaryngology and addressed to J. Elliott Blaydes, Jr., M. D., The Blaydes Clinic, Between North and Frederick on Woodland Avenue, Bluefield, West Virginia.

The program is approved for credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

Family Physicians To Hold Scientific Assembly

Some 18 physicians will speak at the 23rd Annual Scientific Assembly of the West Virginia Chapter of the American Academy of Family Physicians next month in Morgantown. The meeting will be held April 25, 26 and 27 at the Lakeview Country Club. It will open at 8:45 A.M. Friday, April 25, and conclude on Sunday at 12:30 P.M.

The scientific speakers will include Drs. Jerome H. Aarons, Department of Medicine, Magee Women's Hospital, Pittsburgh; Gerald M. Penn, Director of Clinical Laboratories, Children's Hospital, Columbus, Ohio; Raymond T. Benack, Wheaton, Maryland; Ralph E. Haines, Professor, Pediatrics and Medical Microbiology; and Director, Infectious Diseases Division, Children's Hospital, Columbus, Ohio;

William J. Holloway, Director, Infectious Diseases Research Laboratory, Wilmington (Delaware) Medical Center; Perry Kalis, Division of Infectious Diseases, West Virginia University School of Medicine; Albert S. Klainer, Professor and Chairman, Department of Medicine, Morristown (New Jersey) Memorial Hospital, Rutgers University; John G. Boutselis, Professor, Obstetrics and Gynecology, Ohio State University College of Medicine;

George R. Smith, Jr., Allegheny Clinic, Shawsville, Virginia; Archibald M. Jones, Jr., Marietta, Ohio; Irving Kushner, Professor of Medicine, Cleveland Metropolitan General Hospital; Terry Langer, Department of Cardiology, University of Pennsylvania; W. Hugh Missildine, Psychiatrist, Columbus (Ohio) Children's Hospital; C. Wayne Weart, WVU School of Pharmacy;

John W. Traubert, M. D.

Albert S. Klainer, M. D.

A. D. Ghaphery, Wheeling; W. Keith C. Morgan, Professor of Medicine and Chief, Pulmonary Medicine, WVU; and Roy Witherington, Professor and Chairman, Urology, University of Georgia.

William D. Crigger, M. D., South Charleston, is President of the West Virginia Academy, and John W. Traubert, M. D., Morgantown, President-Elect, is Program Chairman. Participants will be welcomed during opening remarks Friday morning by John E. Jones, M. D., Dean of the WVU School of Medicine.

Speaking at the annual banquet Saturday evening will be Mr. David L. Schmidt, President of Schmidt, Pryor and Company, Management Consultants in Mission, Kansas.

There will be a registration fee of $35 (including two luncheons) and a banquet fee of $12.50 per person. There will be no registration fee for nurses, interns, residents and students.

The Annual Assembly has been approved for 20 hours of credit in Category 1 by the AAFP.

WVU Otol. Division To Sponsor PG Seminar April 25

The First Annual Residents Teaching Day of the Division of Otolaryngology at the West Virginia University Medical Center will be held on April 25, it was announced by Philip M. Sprinkle, M. D., Professor and Division Chairman. The program will be a postgraduate seminar for otolaryngologists in West Virginia and the surrounding area.

Guest speakers will include Drs. Vincent Hyams, Chief of the Otolaryngology Division at the Armed Forces Institute of Pathology in Washington, D. C.; Dr. Robert Cantrell, Chief of Otolaryngology at the U. S. Naval Hospital in San Diego, California; Dr. Harry McCurdy, Washington, D. C., Director of the American Council of Otolaryngology; and Dr. Wally Berman of Beverly Hills, California.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Mar. 1-4—Am. Assn. Pathologists & Bacteriologists, New Orleans.

Mar. 2-7—First Annual Maryland Hospital Medical Staff Conf., White Sulphur Springs.

Mar. 1-6—Am. Acad. of Orthopaedic Surgeons, San Francisco.

Mar. 6—Am. Ortho. Society for Sports Medicine, San Francisco.

Mar. 8—Conference, WVU Dept. of Medicine, Morgantown.

Mar. 13-19—Am. Coll. of Allergists, Bal Harbour, Fla.

Mar. 20-21—Natl. Conf. of Rural Health, Roanoke, Va.

Mar. 30—April 4—Am. Coll. of Radiology, Portland.

Apr. 2-4—Occupational Lung Disease PG Course (WVU Co-Sponsor), Morgantown.

Apr. 6-10—Am. Assn. Neurological Surgeons, Miami Beach.

Apr. 7-10—Am. College of Physicians, San Francisco.

Apr. 9-10—Spring Meeting, W. Va. Chapter, Am. Academy of Pediatrics, Elkins.

Apr. 9-12—Am. Gynecological Soc., Phoenix, Arizona.

Apr. 14-16—Am. Assn. for Thoracic Surgery, N. Y. City.

Apr. 17-20—Med. Assn. of Georgia, Atlanta.

Apr. 21-24—Recent Advances In Allergy, Hot Springs, Va.

Apr. 23-26—Science Assembly, Pa. Chapter of Am. Coll. of Emergency Physicians and Emergency Depart. Nurses Assn., Philadelphia.

Apr. 25—First Annual Residents Teaching Day, Div. of Otolaryngology, WVU Med. Center, Morgantown.

Apr. 25-27—W. Va. Chapter, AAFP, Morgantown.

Apr. 27-30—W. Va. Acad. of Ophth. & Otol., White Sulphur Springs.

Apr. 28-May 3—Am. Acad. of Neurology, Bal Harbour, Fla.

Apr. 30-May 2—Med. & Chirurgical Faculty of the State of Maryland, Hunt Valley, Md.

May 1-4—Am. Society of Internal Medicine, Washington, D. C.

May 1-4—North Carolina Med. Society, Pinehurst, N. C.

May 5-8—Am. Coll. of Ob. & Gyn., Boston.

May 11-15—Am. Urological Assn., Miami Beach.

May 18-24—Am. Gastroenterological Assn., San Antonio, Texas.

June 14-19—AMA Annual Meeting, Atlantic City.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

How to put aside $7500 a year tax free

If you work for yourself you can now put away up to $7500 a year for your retirement. And exclude the full amount on your federal income tax return.

Up to now, anybody who is self-employed was allowed a special tax deduction for retirement funds of only 10% of earned income with a limit of $2500. Now a Congressional act has changed all that. To an annual amount of 15% with a $7500 limit.

To help you get the full benefits under the new law, we've developed a master retirement plan for people like you.

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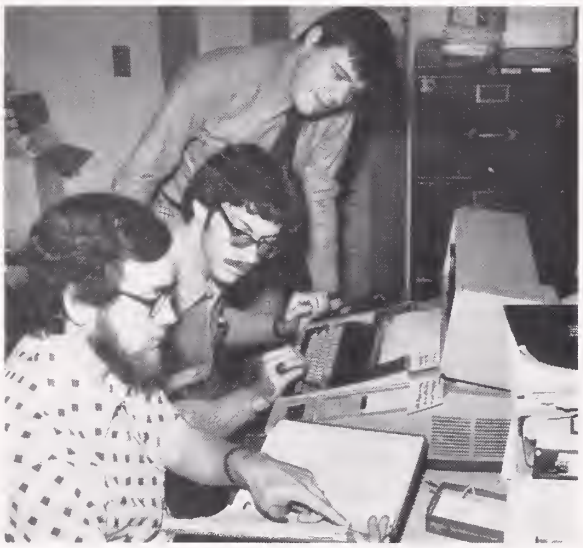
WVU Medical Center –News–

THE computer terminal in West Virginia University Medical Center Library, used for nearly three years for science bibliography searches, now has two new functions.

It can be either a tutor or a simulated patient.

Known as Computer Assisted Instruction, the new service allows the individual, without prior computer experience, to receive instruction in the health sciences. The simulated patient programs permit the student to gain skill in medical problem-solving and diagnosis.

The library terminal is linked by telephone to the Ohio State University Medical Center and Massachusetts General Hospital. Connection to the computers in these two centers is made through the Tym-Share Network by dialing an access node in Arlington, Virginia, which in turn directly connects the desired data bank with the terminal.



Jack Smith of Dunbar checks out a computer symbol for Paul Meade of Huntington while Sidney Jackson of Morgantown looks on. The three West Virginia University School of Medicine students find Computer Assisted Instruction an invaluable aid in health science study and patient evaluation. The computer terminal is located in the WVU Medical Center Library.

Ohio State University has developed a series to use in its independent study program for the basic sciences. Massachusetts General Hospital has concentrated on programs which simulate patient-physician encounters. These presentations allow the student to match his diagnostic ability with that of specialists in such fields as acid-base disturbances, traumatic injuries and cardiac abnormalities.

"It gives us a chance to try out our theories without being intimidated or wearing the patient out with numerous questions," says Sidney Jackson of Morgantown, a second year medical student.

- **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

His classmate, Jack Smith of Dunbar, agrees. "Everyone who has used it thinks it's a good supplement to health science courses. Not only medical students, but nursing, pharmacy and dental students can benefit," he added.

In patient simulation, the computer provides the medical history asked for by the student, giving him only the data he requests. Results of laboratory tests, blood pressure readings, general appearance and age of the patient and any other pertinent information is typed out on the terminal, but the student must be sharp in his query. If his diagnosis is wrong because he hasn't taken into consideration or requested vital information, the computer tells him so.

Operation of the computer requires no special training. Procedures for reaching the data bank desired and operating the terminal are easily learned. A code book kept next to the terminal provides symbols (mostly two-letter abbreviations) for requesting specific information in patient histories.

Robert L. Murphy, librarian at the Medical Center, is encouraging faculty and students to use CAI as a supplement to existing basic science courses and for individual independent study. Further information about the program and the availability of the computer can be obtained at the library circulation desk.

Visiting Fellow Joins Researchers

Dr. Winston D. Edwards has joined researchers at West Virginia University Medical Center as a Visiting Fellow sponsored by the National Cancer Institute.

An experimental pathologist, he will carry out collaborative studies concerning the normal and abnormal growth of the prostate gland.

Doctor Edwards, whose home is in Jamaica, West Indies, received his graduate training at Universitat Wien in Austria and worked at the National Cancer Institute in Vienna before becoming Visiting Fellow at the National Cancer Institute in Bethesda, Maryland.

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The Month in Washington

• From the Washington Office of the American Medical Association.

THE 94th Congress, which numbers within its ranks the largest group of Democratic freshmen representatives to have crossed the Potomac in a generation, has quickly proved that it has a will of its own and a flagrant disregard for the tradition of seniority.

A successful "freshman revolt" within the House Democratic caucus has toppled a number of good-old-boys from important committee chairmanships and dealt a stinging blow to the half-century old seniority system.

A less dramatic revolution, but just as significant, has quietly occurred in the Senate. Senator Edward Kennedy, (D-Mass.), after mustering a liberal coalition in his party's Steering Committee, handed out a beating to Democratic conservatives with respect to committee assignments.

But what legislative inklings this tumultuous reorganization of the Congress holds for medicine is still far from clear.

Saddled with grave economic problems, President Ford stated unequivocally that his Administration will not introduce a national health insurance measure (NHI) in the first session of this Congress. Making it painfully clear in his State of the Union message that the Congress was also saddled with grave economic problems, the President also said that he would veto any approved new spending program other than those concerned with energy.

The President's stand would seem to make it difficult indeed for Democratic liberals to get a NHI bill enacted this year, despite the enormous pressures from Labor that some of them feel.

On the other side of the picture, however, House Speaker Carl Albert (D-Okla.) in his party's formal reply to the President's State of the Union message, urged the President to reconsider his apparent threat to veto NHI this year. Albert said NHI merits high priority.

Other top members of the Democratic leadership in both houses have gone on record as favoring NHI this year, including Al Ullman (D-Ore.) who has replaced Wilbur Mills as Chairman of the House Ways and Means Committee.

During the organization of the 94th Congress, the House Ways and Means Committee was expanded from 25 to 37 members—largely through the addition of liberals—and for the first time subcommittees were established, four in number. Under the "two-to-one-plus-one" formula governing party representation on committees, this means that Ways and Means now consists of 25 Democrats and 12 Republicans.

New Chairman of Health Sub-Committee

Chairman of the new Ways and Means subcommittee on health is Rep. Dan Rostenkowski (D-Ill.). Apparently determined to make a name for himself in the health field, the Chicago democrat has declared, "I see my role not as a proponent of an individual point of view, but rather as that of a consensus-builder—one who will try to resolve the differences that presently block the passage of this landmark program."

Rostenkowski said his 13-member panel will start work on health legislation immediately following Ways and Means' deliberations on the President's Emergency Energy and Tax message.

"Although regular meetings of my committee won't begin until the early spring," he said, "I hope that the other committee members will review the considerable materials that are now available on this subject in order that in the spring we can begin in earnest.

"At the present time, over $100 billion is spent annually on the health care of the American people; thus, any legislation that seeks to significantly alter both the financing and the delivery of that health care will have to be developed with an acute sensitivity of the many diverse problems involved. Equally as important in changing the present system of health care, we must also be concerned with the 4.4 million Americans who are employed in this, the nation's third largest industry."

Shortly after making this statement, Representative Rostenkowski announced the formation of an Advisory Panel of National Health Insurance—"a group from whom the subcommittee can draw expert information and advice for use in its work on national health insurance."

The subcommittee chairman's statement continued: "The passage on national health insurance legislation is a must, but most important of all, it must be sound, workable legislation. The people who have agreed to serve on this Advisory Panel are recognized experts.

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Obituaries

SEGUNDO C. ITURRIAGA, M. D.

Dr. Segundo C. Iturriaga, Montgomery family physician, died on January 30 at his home there. He was 56. Doctor Iturriaga was associated with Montgomery General Hospital for nine years before going into private practice.

A native of Cuba, Doctor Iturriaga was a graduate of Manzanillo there and received his M. D. degree in 1946 from the University of Havana School of Medicine. He served an internship and residency at Montgomery General Hospital, 1961-65. He had been a resident of Montgomery for 14 years.

Doctor Iturriaga was a member of the Fayette County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; three daughters, Mrs. Conchita Rubio of Martinsburg, Miss Christina Iturriaga, a student at Concord College, and Miss Marta Iturriaga, a student at West Virginia University; the father, Jose Iturriaga of San Juan, Puerto Rico; two sisters, Mrs. Graciella Reina of San Juan and Mrs. Leticia Solana of Miami, Florida; and a brother, Cesar Iturriaga of Havana.

* * *

JANET R. STRADER, M. D.

Dr. Janet R. Strader, Morgantown family physician, died on January 3 in a hospital there. She was 45. A native of Harman (Randolph County), Doctor Strader had practiced in Morgantown for 13 years. She was a member of the staffs of Monongalia General and University hospitals in Morgantown.

Doctor Strader was a graduate of Davis & Elkins College and received her M. D. degree in 1960 from the Medical College of Virginia.

Survivors include two daughters, Janet Fay and R. Renee Strader, both at home; two sisters, Miss Kathleen Harman of Harman and Mrs. Robert Thompson of Elkins.

Human Sexuality Summer Program In Indiana

The Indiana University Institute for Sex Research, Inc., will hold its "1975 Summer Program in Human Sexuality," July 23-August 1.

The program will include a lecture course, forums on sociosexual issues, sex counseling symposium and attitude-reassessment program. Registration will end June 20. The fee is $285.

For further information contact the Institute for Sex Research—Summer Program, 416 Morrison Hall, Indiana University, Bloomington, Indiana 47401.

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Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

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Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

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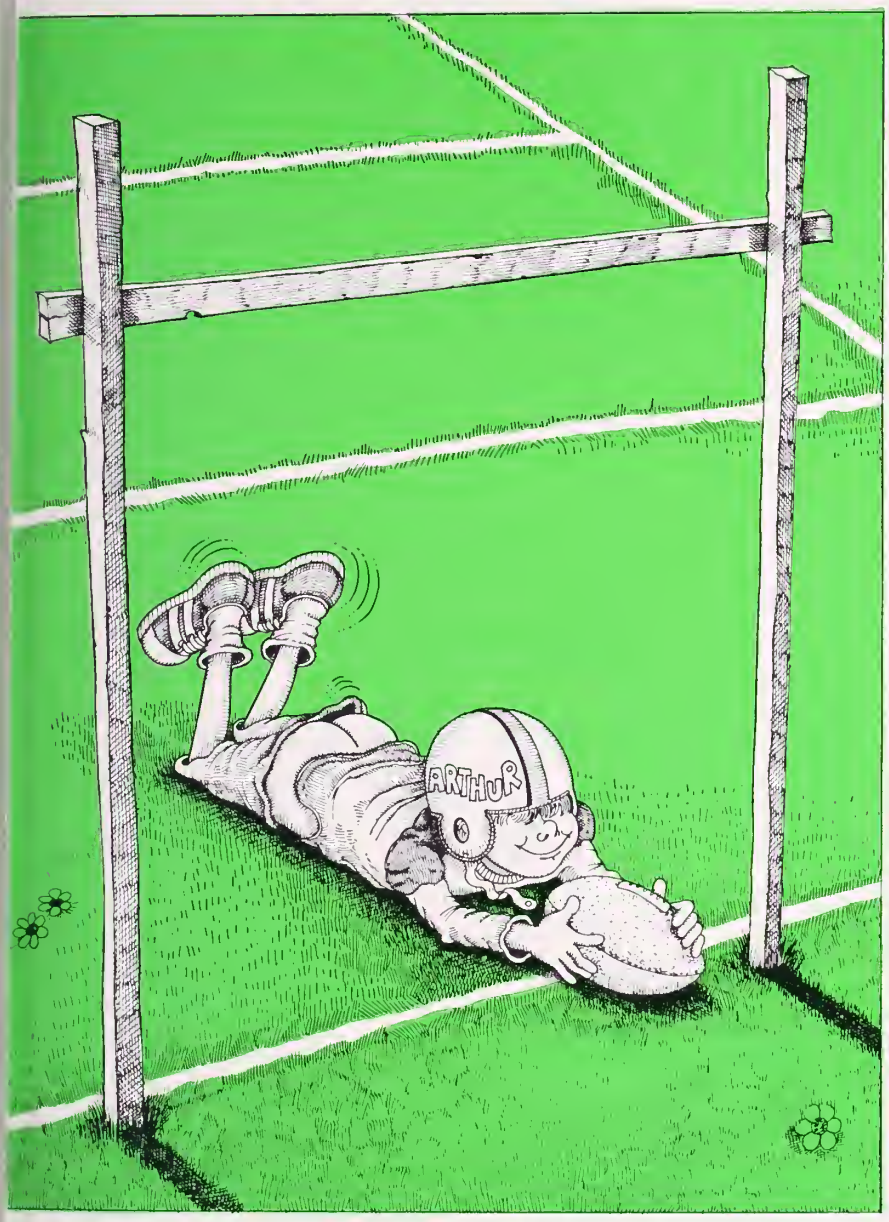

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County Societies

McDOWELL

The McDowell County Medical Society met on January 15 at the Stevens Clinic Hospital in Welch. Considerable correspondence was discussed and the membership was informed about local, state and national dues for 1975 and the $60 assessment of the American Medical Association for 1975. A letter from the State Medical Association's attorney clarifying physicians' income tax deductions for pension plan contributions was read.

A document from the State Director of Comprehensive Health Planning was presented and it was decided to delay comment until the action of the Council of the State Medical Association was made known following its meeting on January 26.

A letter was presented from Dr. Frank J. Holroyd, Chairman of the Medical Licensing Board of West Virginia, requesting our feelings regarding physician's assistants. The Society's recommendation was: "Each physician's assistant is to be individually certified by the Medical Licensing Board of West Virginia with his limitations to be specifically stated as determined by his training and experience and he or she is to work directly under the supervision of a doctor or group."—Arthur A. Carr, M. D., Secretary.

Dermatopathology Symposium At NYU, June 26-28

A three-day dermatopathology symposium entitled "Histologic Diagnosis of Inflammatory Skin Diseases" sponsored by the Departments of Dermatology and Pathology of New York University School of Medicine, will be held in June. Directed by Dr. A. Bernard Ackerman, Associate Professor of Dermatology and Pathology, it will be held in Alumni Hall, NYU Medical Center, 550 First Avenue, New York, New York. The program will begin on Thursday, June 26, at 1 P.M. and conclude on Saturday, June 28, at 1 P.M.

The course is designed to provide a logical and reproducible approach to the diagnosis and understanding of inflammatory skin diseases. A method will be taught for making specific histologic diagnoses in most inflammatory skin diseases, thus avoiding their being signed out as "chronic nonspecific dermatitis." Careful clinicopathological correlation will also be emphasized.

The format will be 45- to 60-minute lectures followed by a 30-minute question and discussion period in which the faculty will participate. Representative examples of all categories of inflammatory skin diseases will be available for microscopic study. The tuition is $200. For residents in training: $100. For further details inquire at the Office of the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York, N. Y. 10016.

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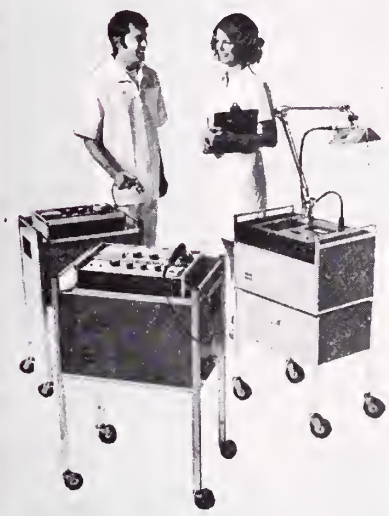

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Breast self-examination:

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item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But*, among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

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WANTED—Young physicians for a growing town with industry, a college and a good place to live. Town of 7,000, rural setting, pleasant surroundings, accessible to recreation. Openings for several family practitioners and one internist. Must like to help people and be willing to work. Contact Dr. Joseph B. Reed, M. D., 93 W. Main Street, Buckhannon, West Virginia 26201. Phone (304) 472-6041.

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FOR SALE—Accu-stat Blood Chemistry System, including BUN, Alkaline Phosphatase, Cholesterol, SGPT, Glucose and Creatine Modules; also a Burdick Ultrasonic Therapy Unit. Both are in good working condition and available at one-half listed price. Wanted: Hospital size, self-contained Autoclave (not central steam). Contact H. J. Fallon, DVM, 200 Fifth Street, W., Huntington, W. Va. Phone: 525-5122.

SURGICAL RESIDENCY AVAILABLE: Large metropolitan hospital, fully accredited for residency training. Contact Bert Bradford, Jr., M. D., Director of Surgery, Charleston Area Medical Center, 3200 MacCorkle Avenue, S. E., Charleston, W. Va. 25304.

EMERGENCY ROOM PHYSICIAN—Fully accredited 260-bed general hospital in the center of the Mid-Ohio Valley at Parkersburg, W. Va. Contact R. C. Cowan, Jr., M. D. Telephone 428-8011.

NEEDED—Family physicians for solo or group affiliation in Southeastern W. Va. county seat. Population of 5,000 and more than 8,000 in secondary population area. Immediate access to 40-bed county hospital. Guarantee negotiated directly with hospital; excellent recreational facilities and schools; and organized group clinic under development. Call Mr. Thomas E. Heffernan collect at (304) 799-4193.

WANTED—Two general practitioners and a pediatrician to locate in a rapidly growing and extremely progressive community; excellent recreational facilities; within driving distance of the larger metropolitan areas; modern 45-bed general hospital, fully equipped and staffed; qualified general surgeon in residence. Write HRL, The West Virginia Medical Journal, P. O. Box 1031, Charleston, W. Va. 25324.

WANTED—General surgeon, certified or board eligible—advance to medical director if qualified for a 80-bed JCAH hospital in Southern West Virginia. Top salary plus all benefits. Contact MOB, The West Virginia Medical Journal, P. O. Box 1031, Charleston 25324.

WANTED—A general practitioner to locate in the growing town of Fort Ashby (Mineral County) West Virginia, situated to serve the communities of Short Gap, Springfie'd and Green Spring Excellent opportunity for an ambitious physician. For information on possible assistance in establishing office facilities, contact Doctor Committee, Fort Ashby Lions Club, Fort Ashby, W. Va. 26719.

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cautions:

AL: In the elderly and debilitated and in ren over six, limit to smallest effective ge (initially 10 mg or less per day) to ude ataxia or oversedation, increasing ually as needed and tolerated. Not recom- ded in children under six.

JECTABLE: Keep patients under observa- preferably in bed, up to three hours after l injection; forbid ambulatory patients to ate vehicle following injection; do not nister to patients in shock or comatose s; use reduced dosage (usually 25 to 50 for the elderly or debilitated and for ren age twelve or older.

AL AND INJECTABLE: Though generally ecommended, if combination therapy other psychotropics seems indicated, fully consider individual pharmacologic ts, particularly in use of potentiating ounds such as MAO inhibitors and iothiazines. Observe usual precautions in ence of impaired renal or hepatic func- Paradoxical reactions (e.g., excitement, ulation and acute rage) have been rted in psychiatric patients and hyper- e aggressive children. Employ usual

precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral: Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

For Parenteral Administration: Should be individualized according to diagnosis and response. While 300 mg may be given during a 6-hour period, do not exceed this dose in any 24-hour period. To control acute conditions rapidly, the usual initial adult dose is 50 to 100 mg I.M. or I.V. Subsequent treatment, if necessary, may be given orally. (See Precautions.)

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Oral: Librium® (chlordiazepoxide HCl) *Capsules*—5 mg, 10 mg, 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 50, available singly and in trays of 10.

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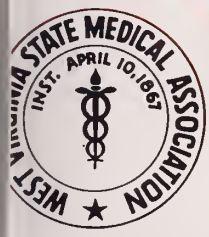

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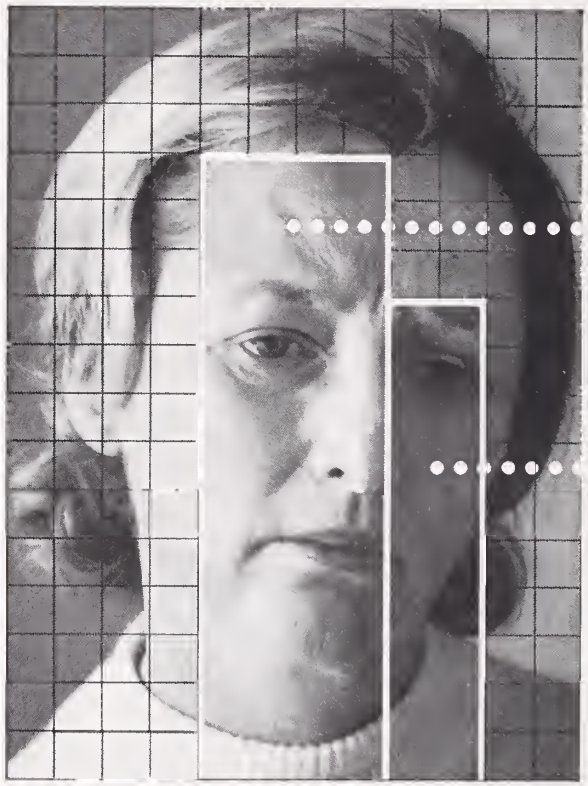

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in e and/ or severity of grand mal sei require increased dosage of star convulsant medication; abrupt w may be associated with tempora in crease in frequency and/ or seve seizures. Advise against simulta gestion of alcohol and other CNS sants. Withdrawal symptoms (si those with barbiturates and alco occurred following abrupt disco (convulsions, tremor, abdomina cle cramps, vomiting and sweati addiction-prone indlviduals und

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two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

e because of their predisposi-
ituation and dependence. In
, lactation or women of child-
e, weigh potential benefit
ssible hazard.

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, or anticonvulsants, consider
harmacology of agents em-
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barbiturates, MAO inhibitors
antidepressants may potentiate
Usual precautions indicated in
everely depressed, or with latent
n, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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APRIL
1975

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1. Armour Thyroid (Tablets). 1975 Physicians' Desk Reference. p. 561.
2. Proloid® (thyroglobulin). 1975 Physicians' Desk Reference. p. 1575.

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3. Stock, J.M., Surks, M.I., and Oppenheimer, J.H.: Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. *290*:529-33, 1974.

Eliminates many of the uncertainties of desiccated thyroid therapy.

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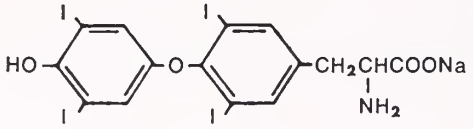

Sodium Levothyroxine

Actions
SYNTHROID (sodium levothyroxine) **Tablets**, taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications
SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications
There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings
Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions
Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets**, the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions
Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration
For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occurs and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How supplied
SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—violet . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green. Depending on strength, these tablets are available in bottles of 100, 500, 1000 and 5000.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution
Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

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The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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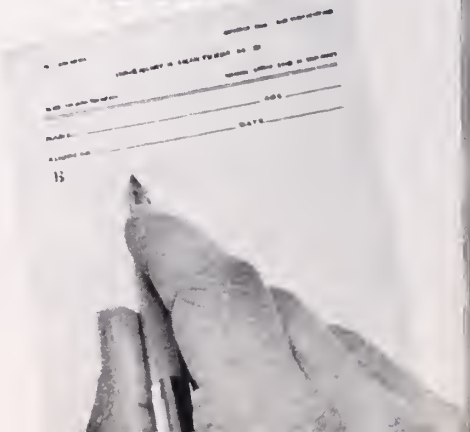
Bioequivalence



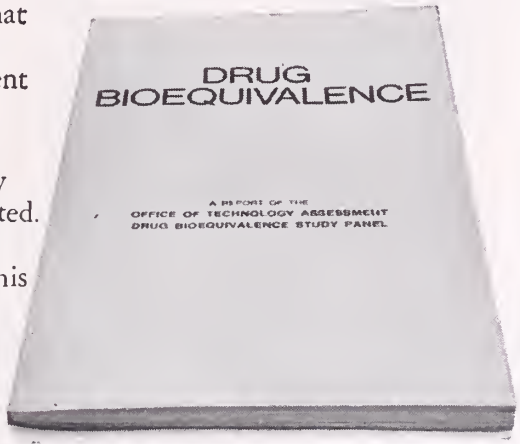
the weight of scientific opinion:

If the pharmacist substituted a chemically equivalent drug for the one you have specified for your patient—could you be certain of that product's safety and effectiveness simply because the chemical content was the same?

Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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The West Virginia Medical Journal

Vol. 71, No. 4 April, 1975

Rational Antimicrobial Therapy*

(A Review)

Bosko Postic, M. D.; and Arnold Brown, M. D.

Introduction

This review on the rational use of antimicrobial agents is offered primarily for the practicing physician. No attempt is made to cover each antibiotic systematically. The reader is referred to recent monographs[4,9] for exhaustive reviews on antibiotics and chemotherapy.

An understanding of the mechanism of action of antimicrobial drugs is crucial to their rational use and is considered first. Treatment with a combination of antimicrobials is also better understood in this context. Sensitivity testing is an important, but often misused, guide for the clinician. The underlying principles and the application of results, therefore, are discussed. Special, non-routine tests, such as serum bactericidal levels, are briefly presented with emphasis on the clinical setting in which they are required.

Impaired renal function at times necessitates the determination of the antibiotic serum level, by special microbiological assays. The clinical usefulness of these tests is described.

In spite of our therapeutic efforts, antibiotic therapy is occasionally unsuccessful. A section is devoted to the analysis of antibiotic failures. The unfavorable outcome of antimicrobial treatment may or may not depend on microbial resistance.

A short review of newer antibiotics is also offered. Comparisons with the more established agents are stressed.

Finally, our strategy of antimicrobial treatment is presented. The approach to treatment of established and suspected infection is outlined. The clinical situations requiring antimicrobial prophylaxis and drugs used for this purpose are also covered.

*Portions of this paper were delivered by Doctor Postic during a meeting of the Harrison County Medical Society held in Clarksburg on November 7, 1974.

The Authors

- **Bosko Postic, M. D., Chief, Infectious Disease Section and Associate Professor of Medicine; and Arnold Brown, M. D., Staff Physician and Assistant Professor of Medicine, the Veterans Administration Hospital, Pittsburgh, Pennsylvania; and the University of Pittsburgh School of Medicine.**

Mode of Action and Interaction of Antimicrobial Agents*

Antibiotics can be considered to attack the bacterial cell at three different major sites (Table 1). The first to be considered, the bacterial cell wall, is a complex structure consisting of chains of alternating n-acetyl-muramic acid and n-acetylglucosamine which are cross-linked by peptide side-chains.

Vancomycin and bacitracin interfere with the growth of the mucopeptide chains at different, although closely related sites.[4,9]

Table 1

General Mode of Action of Antimicrobial Agents

Bacterial Structure	*Agent(s)*[a]	*Effect*
Cell Wall	Penicillins	bactericidal
	Cephalosporins	
	Vancomycin	
	Bacitracin	
Cytoplasmic Membrane	Polymyxins	bactericidal
Cytoplasm	Aminoglycosides	bactericidal
	Tetracyclines	bacteriostatic
	Chloramphenicol	bacteriostatic
	Erythromycin	mainly bacteriostatic
	Lincomycin	
	Rifampin	bactericidal
	Nalidixic acid	bacteriostatic

a) Polymyxins include polymyxin B and colistimethate; aminoglycoside antibiotics include: streptomycin, kanamycin, neomycin, and gentamicin, and the newer agents tobramycin and amikacin.

*Antimicrobials and or antibiotics are used interchangeably with the above in the text, unless specified differently.

The penicillins and the cephalosporins inhibit the final step in bacterial cell wall synthesis: the cross-linking of the peptide side-chains. Only the penicillin inhibits an enzyme (or enzymes) involved in transpeptidation, probably by structurally resembling the enzymes' substrate, the terminal dipeptide of the n-acetyl muramyl pentapeptide subunit. A weakened cell wall results which can no longer contain the cell contents which exert an outward osmotic pressure equivalent to 20-30 atmospheres in the case of gram positive cocci. The bacterium is lysed as it attempts to divide, unless it is protected by a hypertonic environment.

The polymyxins (polymyxin B and colistin) insert themselves between the cell wall and the cytoplasmic membrane. This is a detergent-like action which does not require an actively metabolizing bacterium, and is thought to be due to the presence of lipid-soluble (hydrophobic) and water-soluble (hydrophilic) ends of these polypeptide antibiotics with affinities for the corresponding layers of the cytoplasmic membrane. In part, this unique bactericidal action makes the polymyxins suitable for local application. Because of the similar structure of mammalian cytoplasmic membranes, the polymyxins are relatively toxic for the host when used systemically.

Agents which act at cytoplasmic sites (Table 1) affect a number of different steps of bacterial intermediary metabolism and macromolecular syntheses.

Rifampin inhibits RNA synthesis, while nalidixic acid inhibits the synthesis of DNA.

The aminoglycosides bind irreversibly to bacterial ribosomes, the protein-synthesizing organelles. Inhibition of protein synthesis results and its irreversibility accounts for the bactericidal action. On the other hand, tetracyclines and chloramphenicol, which by other mechanisms also inhibit protein synthesis, must be continuously present in the medium in order to exert their effect. Their effect, therefore, is bacteriostatic.

Whether an antimicrobial agent possesses bactericidal or bacteriostatic activity may be generally predicted from our understanding of their mechanism of action. The definition of the type of action in a given case may be arrived at by special microbiological assays (see below in discussion of sensitivity tests). In most clinical instances, the 'cidal or 'static nature of antibiotic effect is not essential. Thus, pneumococcal pneumonia may be cured with erythromycin, a bacteriostatic agent. Chloramphenicol, a bacteriostatic agent, will be curative in more than 90 per cent of the cases with meningitis due to Haemophilus influenzae. There are two instances, however, in which the need for a bactericidal drug has been demonstrated: (a) Endocarditis is rarely, if ever, cured by 'static agents, and (b) when the neutrophil count is under 1,000/mm.^{3} in the presence of sepsis, the use of a bactericidal agent is essential, but may still result in failure.

The consideration of whether an antibiotic is bactericidal or bacteriostatic may also be important when more than one antibiotic is used for the treatment of infection. Some clinically useful combinations are presented in Table 2. As can be seen, the combined therapy with a penicillin and an aminoglycoside resulted in synergy in several instances. The best known of these is in the treatment of endocarditis due to the enterococcus. True synergy means that the combined effect of two agents is greater than the expected sum of the activities of each alone and should permit a decrease of the dose of each member of the drug pair to achieve effective bacterial inhibition. With the above example of such a synergistic pair, penicillin may facilitate, through its action on the cell wall, the penetration of streptomycin into the cytoplasm of an enterococcus, whose resistance to streptomycin is due to impermeability.

Table 2

Antibiotic Combinations

Rationale	*Agents*[a]	*Effect On*
To increase activity	PCN + aminoglycoside	Strep. fecalis
	carbenicillin + gentamicin	Pseudomonas aeruginosa
	sulfonamide and trimethoprim	agents causing urinary infection
To decrease emergence of resistant strains	antimycobacterial agents	M. tuberculosis
To decrease toxicity	triple sulfonamides	improved solubility

a) PCN = penicillin

A sulfonamide (sulfamethoxazole) and trimethoprim, constitute the only fixed antimicrobial combination in current use. Both agents inhibit bacterial folate metabolism (Figure 1). Sulfonamides inhibit an early step, the incorporation of P-aminobenzoic acid (PABA) into the precursor of folate, pteric acid, while trimethoprim inhibits the enzyme dihydrofolate reductase. This results in inhibition of the synthesis of tetrahydrofolic (folinic) acid, a coenzyme required for nucleotide synthesis and the methylation of amino acids. The final step in "folate" synthesis is, unlike the

early steps, common to both mammalian and bacterial cells (Figure 1). The antifolate effect of trimethoprim, unlike some other folate antagonists, however, does not occur with usual doses in man, since the bacterial enzyme (dihydrofolate reductase) displays a greater affinity for the drug than does its mammalian counterpart. When the excretion of trimethoprim is decreased, however, as in renal failure, the accumulated drug may produce the characteristic bone marrow inhibition of folate deficiency. This can be reversed with injections of folinic acid (tetrahydrofolic acid) (Figure 1). It is better, however, to avoid this drug in patients with azotemia.

In the treatment of tuberculosis, two or more effective drugs are used in order to decrease the

The Sites of Action of Sulfonamide and Trimethoprim in Bacterial and Mammalian Cells

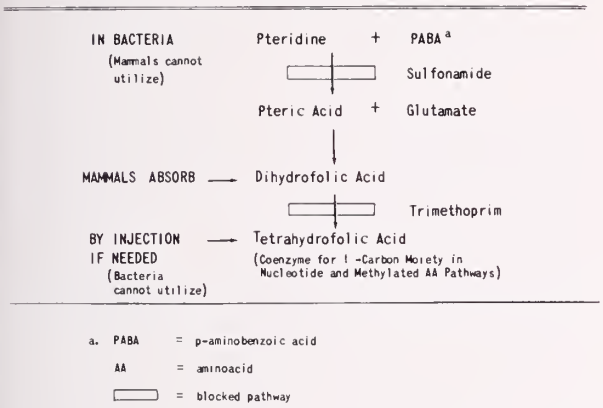

Figure 1.

emergency of drug-resistant mycobacteria. There may be a spontaneous, rare mutation to isoniazid (INH) resistance occurring at the approximate rate of one in a million mycobacterial cell divisions. Resistance to ethambutol occurs at a comparable, but independent rate. One would predict that the combined resistance would occur in $10^{-6} \times 10^{-6} = 10^{-12}$ mycobacteria, which is sufficiently rare to be adequately dealt with by the patient's defenses. Thus, the emergence of drug-resistant mycobacteria is effectively delayed by such combined therapy.

Perhaps the penicillins represent the best example of how structural alterations may modify the antibacterial and pharmacologic effects of antibiotics. One penicillin inactivating enzyme which cleaves the amide bond that joins the phenyl acetyl side chain of penicillin G onto the 6 amino-penicillamic acid moiety (6APA), is used in the production of semi-synthetic penicillins by producing free 6 APA to which specific synthetic side chains may be added. The basic structure of penicillin is presented in Figure 2. Modifications of the side chain led to the production of the compounds listed with their particular characteristics in Table 3. A more commonly found penicillin inactivating enzyme is β lactamase "penicillinase"; it may be synthesized by the bacterium constitutively (continuously) or may be inducible (synthesized only in the presence of a specific inducer, i.e. penicillin). This enzyme, which inactivates penicillin by opening the β lactam ring, to form a penicilloic acid, is the basis of resistance of many bacteria

BASIC STRUCTURE OF PENICILLIN

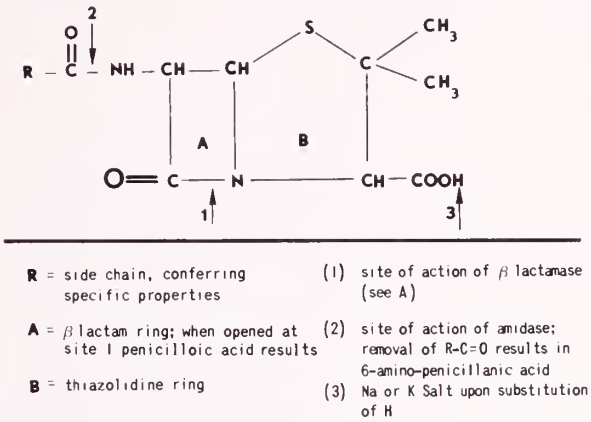

Figure 2.

including staphylococci and some gram negative organisms (Figure 2).

Table 3

Chemical and Biologic Characterization of Various Commonly Used Penicillins

Chemical Structure (Ring) at R[a]	*Generic Penicillin*	*Action — Characteristic*
Benzyl	G	effective against many organisms in minimal concentration
Phenoxymethyl	V	improved absorption in the gastrointestinal tract; increased acid resistance
Dimethoxyphenyl Ethoxy-Naphthyl Methyl-Phenyl-Isoxazolyl	Methicillin Nafcillin Oxacillin	resist well the action of β lactamase; effective against penicillinase-producing staphylococci
Aminobenzyl	Ampicillin[b]	spectrum extended or improved by the inclusion of some gram negative bacteria
Carboxybenzyl	Carbenicillin	similar to ampicillin, spectrum includes Ps. aeruginosa and indole positive Proteus

a) See Figure 2.

b) Ampicillin and carbenicillin are still susceptible to β lactamase (like Penicillin G or V) and are not recommended for the treatment of staphylococci infections.

As noted in Table 3, the antistaphylococcal penicillins are resistant to β lactamase (penicillinase). Table 4 summarizes the antibacterial and pharmacologic properties of methicillin, oxacillin and nafcillin. However impressive some of the *in vitro* differences appear, the clinical effectiveness of the three drugs is surprisingly comparable as judged by treatment failures in patients with severe staphylococcal infections. This failure rate, about 33 to 37 per cent, is influenced more by the underlying condition of the patient than by the differences in antibacterial effectiveness between the drugs. How then does one select the agent of choice for a particular patient? Clearly, in this case, each of the antibiotics is effective. The choice may depend on the site of infection or on the bacterial etiology. For example, Nafcillin might be selected for a biliary tract staphylococcal infection, which is rare, or if one is dealing with a mixed staphylostreptococcal infection. While methicillin is effective, we avoid its use because it is reported to cause interstitial nephritis in certain patients. Although other penicillins have been associated with this condition, the relative frequency of the methicillin nephritis appears to be greater. This was not proven, since the number of patients receiving an antibiotic, once approved for general use, is not known. Therefore, the rates of nephritis occurring in patients treated with these drugs cannot be ascertained. Oxacillin appears safe and effective. With intravenous oxacillin we cured a staphylococcal septic thrombophlebitis in a severely neutopenic patient (200/mm.^{3}) with underlying acute lymphoblastic leukemia.

Table 4

Comparison of Injectable Antistaphylococcal Antibiotics

Characteristic	*Methicillin*	*Oxacillin*	*Nafcillin*
1 hour level[a] (mcg./ml. serum)	60	40	40-80
Serum binding (per cent)	37	94	90
Resistance to penicillinase	medium-high	medium	high
MIC[b] for penicillinase (+) staphylococci	1.6	0.4	0.4
MIC for streptococcus (gr. A)	0.2	0.04	0.04
Excretion	80 per cent renal	40 per cent renal 40 per cent bile	10 per cent renal 90 per cent bile
Interstitial Nephritis	cases reported	none or very rare	rare

a) 1 g. of antibiotic injected intravenously at 0 hour.

b) Minimal inhibitory concentration as mcg./ml.

Routine and Non-routine Antibiotic Sensitivity Tests

The disc sensitivity, Kirby-Bauer, test[11] currently is widely used and standardized in the USA. The results concerning a particular clinical isolate are reported as sensitive, intermediate and resistant. These qualifications are based on measurements of the zones of inhibition around the antibiotic discs on a plate seeded with the test organism. The width of the zone of inhibition can be correlated with the minimal inhibitory concentration (MIC) of a particular antibiotic. The actual MIC may be determined in a separate test. In such a test, a known amount of antibiotic is incorporated in the medium (broth or agar) into which the test organism is inoculated and the presence or absence of bacterial growth is noted. Most hospital laboratories do not routinely determine the MIC on their bacterial isolates. The result "sensitive" implies that the MIC of the organism is equal to or less than the antibiotic level which may be achieved in the tissue fluid(s) (serum, urine) after a recommended dose.

Most sensitivity test methods are most useful in predicting whether one may achieve effective antibiotic levels in the internal milieu of the body (i.e. serum or tissue levels), rather than the urine where the pH and other factors may be more variable. The activity of some antibiotics may vary considerably with changes in the pH or ionic content of the medium (Table 5). Failure to consider the effect of urinary pH on the activity of the antibiotic may explain in some instances the failure of antimicrobial therapy to cure an infection caused by an organism which appears to be sensitive on routine testing to the agent used. Thus, gentamicin, which is more active in an alkaline milieu may not cure an infection if the urine is very acid. The outcome of treatment may be more favorable if during gentimicin therapy the urine is alkalinized with oral sodium bicarbonate (if this can be tolerated by the patient).

Listed in Table 5 is an *in vivo* method of estimating the sensitivity of the urinary pathogen to the given antibiotic. We find this method to be reliable and helpful for the monitoring of treatment. The introduction of "office bacteriology"[10] is quite appropriate for this test, because of its simplicity, its relative speed, and out of considerations for cost to the patient. With minimal equipment consisting of bacteriologic plates, a loop and an incubator (office size), the number

Table 5

Interpretation of the Antibiotic Sensitivity Patterns of Urinary Pathogens and Therapeutic Implications

1. A "Resistant" organism (by Kirby-Bauer standards) may be susceptible to the high urine levels achievable by some antimicrobial agents.
2. Urine pH is frequently five to six; sensitivity testing is done at the pH of the agar medium (7.2 to 7.4).
3. pH Optimum for antibacterial effect:

Alkaline	*Acid*	*Not affected*
aminoglycosides	tetracyclines	penicillin G
erythromycin	mandelic and hippuric acid	polymyxins

4. *In vivo* sensitivity test: repeat the quantitative urine culture 24 hours after therapy begun. If repeat count is 1 per cent or more of the original, consider the bacterium resistant, unless the pH of the urine is unfavorable for optimal effect (See #3).

of surviving bacteria in the urine can be determined by inoculating uncentrifuged urine with a calibrated loop onto a single plate. This is a simple procedure requiring only a few seconds to complete.

One should bear in mind that routine sensitivity tests measure the growth-inhibiting, bacteriostatic, concentrations of antibiotics. The medium inoculated with bacteria contains the antibiotic continuously, and therefore the bactericidal effect (in which the bacteria are unable to recover once the antibiotic is gone) cannot be estimated. As mentioned before, in endocarditis, a bactericidal effect of the particular antibiotic(s) in the patient's serum is essential. The initial choice of the antibiotic(s) is made on clinical and microbiological grounds. The dose is injected, the blood collected one hour later and the serum then assayed for its ability to kill the specific organism which has been isolated from the patient.

The principle of the assay is presented in Figure 3. After the first 24 hours of *in vitro* incubation, the bacteriostatic level can be estimated as the highest serum dilution which has inhibited visible bacterial growth. The tubes are then subcultured onto plates free of any antibiotic(s), and the next day, the bactericidal serum level is estimated as the serum dilution which irreversibly inhibited colony formation on these plates more than 99 per cent when compared to control cultures. It is not unusual that, even with primarily bactericidal antibiotics, one may observe a bacteriostatic effect at smaller doses (i.e. the serum can be diluted further than that which is bactericidal). This is shown in the example in Figure 3. Thus, operationally we observe both effects (bacteriostatic at smaller doses and bactericidal at higher doses) with the same antibiotic. Data of Jawetz[7] and others suggest a bactericidal effect at a serum dilution of 1:10 or higher is associated with an extremely good chance of eradicating the offending organisms while lower levels are not.

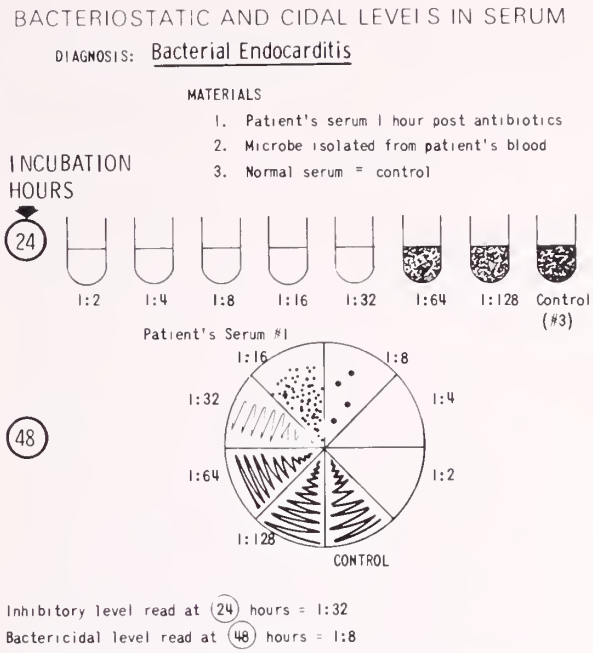

Figure 3. An example of the 2-step assay is shown. First, the test serum is diluted. Each tube is incubated with approximately 10^4 colony forming units of the offending bacterium. Following incubation at 35-37 C for 24 hours, the inhibitory (bacteriostatic) level is read. Each tube is subcultured and streaked with a loop onto a section of a plate. The resulting growth is scored after another day of incubation. Dense areas mean heavy bacterial growth. The dilution yielding 10 colonies (more than 99% inhibition in comparison to "control") is arbitrarily called the bactericidal serum level.

From the serum dilution test described above and in Figure 3 one cannot precisely calculate the concentration of circulating antibiotic. A microbiologic assay may be used when this must be monitored, as in the case of renal insufficiency. The method of Sabath[12] was adopted by our laboratory. It is of particular usefulness when the aminoglycoside antibiotics, kanamycin or gentamicin, are used in the treatment of gram negative bacterial infections in azometic patients. Since these antibiotics are eliminated mainly by glomerular filtration, their half lives (T 1/2) in the serum are proportional to the creatinine clearance and therefore approximately to the serum creatinine (cr.). Thus, as a rule of thumb, the T 1/2 for kanamycin is 3 x cr and for gentamicin, 4 x cr. The dose interval to maintain effective antibacterial serum levels is each 3 x T 1/2 for kanamycin and 2 x T 1/2 for gentamicin.

These approximations are the basis for the following guidelines:

When initiating treatment with kanamycin or gentamicin in a uremic patient after taking appropriate cultures, the patient may receive one or

two doses as if his renal function were normal. After that, we follow the "variable interval" method (as summarized by Kunin[8]). For kanamycin, give a full adult dose (0.5 g im) at intervals calculated by multiplying the serum creatinine x 9 (in hours); for gentamicin, a full dose (1.0-1.25 mg/kg im) is given at intervals calculated by multiplying the serum creatinine x 8 (in hours). We monitor the adequacy of this regimen by sampling the blood one hour following the administration of the antibiotic and just prior to the next dose. Serum levels of 10 to 30 mcg./ml. are considered satisfactory for kanamycin, while one tries to achieve 5 to 12 mcg./ml. for gentamicin. At these levels, the essential requirements of efficacy and safety are met for the respective antibiotic. When the patient is hemodialysed, one expects removal of the circulating gentamicin. Therefore, the full dose of this antibiotic may be injected immediately following dialysis.

At times, the proper management of infection does not rely on antimicrobial testing in the laboratory. When an anaerobic bacterial infection is suspected on the basis of clinical clues and a gram stain of the purulent exudate, the antimicrobial treatment may be initiated with appropriate drugs: penicillin for infections originating above the diaphragm and clindamycin or chloramphenicol for sites below the diaphragm. An exception is an intracranial infection. This is best treated with a combination of penicillin (20 million units IV/24 hours) and chloramphenicol (3-4 g/24 hours). Chloramphenicol effectively crosses the blood-brain barrier, in contrast to clindamycin which diffuses poorly into the cerebrospinal fluid. The reasons for not doing sensitivity tests of anaerobic bacteria at this time are of a practical nature: (a) there is no standardized method, (b) it usually takes more than 48 hours to grow an anaerobe in culture; therefore, the sensitivity testing would require an additional two to three days; and (c) the usual sensitivity pattern of anaerobes is predictable on the basis of studies in specialized laboratories[5] and is summarized in Table 6.

Another instance in which one should look at the sensitivity pattern with a conscious bias is Salmonellosis. Frequently, Salmonellae show sensitivity to several antimicrobials *in vitro*. Yet, only ampicillin, chloramphenicol and trimethoprim have been proven to be clinically effective in enteric fever. Therefore, to guide the therapy of systemic salmonellosis, only the sensitivity to these three antimicrobials should be considered. The reason for the discrepancy between the *in vitro* testing results and clinical effect of antibiotics, other than the noted three drugs, is not fully understood.

Table 6

Antibiograms of Major Anaerobic Pathogens[a]

Site of likely recovery	*Common Anaerobic Pathogen*	*Penicillin G*	*Chloramphenicol*	*Clindamycin*	*Metronidazole*
Above the Diaphragm	Fusobacteria	S[b]	S	S	S
	Bacteroides melaninogenicus	S	S	S	S
	Anaerobic streptococci	S	S	S	S-R
Below the Diaphragm	Bacteroides fragilis	R	S	S	S
	Clostridium perfringens	S	S	S	S
	Other Clostridia	S	S	S-R	S
	Anaerobic streptococci	S	S	S	S-R

a) Adapted from Gorbach and Bartlett (5).

b) S indicates more than 80 per cent of strains sensitive.
S-R indicates 30-80 per cent strains sensitive.
R means less than 30 per cent strains sensitive.

Failure of Antimicrobial Treatment

Some possible reasons for treatment failure are listed in Table 7.

Table 7

Reasons for Failure of Antibacterial Treatment

1. Treatment started prior to obtaining diagnostic cultures.
2. Treatment based on an unrepresentative microbiological specimen.
3. Treatment started too late or stopped too soon.
4. Development of an altered form of microbe (cell-wall deficient L forms).
5. Development of microbial resistance during treatment.
6. Broad-spectrum antibiotics favor superinfection.
7. Failure of antibiotic penetration into the site of infection.
8. Depressed host defenses.

The rush to treat prior to taking cultures is more harmful and costly to the patient than the scrupulous collection of appropriate specimens prior to the first antibiotic dose. Thus, a febrile patient with a heart murmur should have at least three blood cultures prior to treatment. When there is a suspicion of subacute bacterial endocarditis, and the patient has been receiving antimicrobial therapy, the antibiotics should be discontinued and one to two blood cultures should be obtained daily until positive or for at least seven days. Likewise, a patient with pneumonia should have sputum and blood cultures

taken before receiving the first dose of an antibiotic. Failure to adhere to these simple precautions may result in suboptimal antibiotic selection and unnecessary complications.

The sample submitted for culture must truly represent the microenvironment close to the site of infection. A sputum sample for culture should originate from below the larynx and contain inflammatory cells. If anaerobic pulmonary infection is suspected, a transcutaneous tracheal aspirate, using published procedures, is indicated to avoid the contamination of the specimen with anaerobic mouth flora.[5]

Relapses may also be due to a shorter than optimal course. Briefly, uncomplicated bacterial pneumonia, pharyngitis and urinary tract infection should be treated for 10 to 14 days. Bacterial meningitis should be treated for 14 to 21 days and the treatment monitored by following the cerebrospinal fluid glucose, cell count and protein. Osteomyelitis, necrotizing lung lesions and endocarditis should be treated for one to two months.

In the event of a recurrent urinary tract infection due to the same sensitive organism (example—E. coli after a course of ampicillin), bacteria deficient in cell wall—L forms—may be involved. Empirically, one may "cure" in infection again with a cell-wall inhibiting agent (ampicillin), and once the urine is free of the pathogen, initiate a seven-day-long course with an antibiotic with a ribisomal site of action (i.e.: tetracycline) to eliminate the L forms.

The development of resistant microorganisms to antimicrobial agents may also account for treatment failure. An example of gene mutation to resistance to drugs was discussed under the principle of the combined treatment of tuberculosis. Other mechanisms by which bacteria may change their genetic constitution to drug resistance include transformation, transduction and perhaps more importantly by conjugation.

With respect to the acquisition of antimicrobial resistance by conjugation, two bacterial cells (one of which contains an R factor) "mate," and in the process, the genes responsible for antibiotic resistance are transferred by the resistant stain to the previously susceptible one. Gram negative enteric bacteria may acquire resistance simultaneously to multiple antimicrobials in this manner. The R determinants code in recipient bacteria for the production of various enzymes. Thus, the activity of β lactamase results in hydrolysis of penicillins and cephalosporins. Enzymes may be produced which acetylate chloramphenicol and some aminoglycosides, adenylate or phosphorylate other aminoglycosides or promote a permeability block for tetracycline, and, possibly, isoniazid. Normally, R factor-containing bacteria are in the minority in the intestinal flora. Upon treatment with an antimicrobial agent, their proportion may increase, and may increase the opportunity for transfer of resistance to susceptible organisms. A possible example of this are patients treated with antibiotics for Salmonella enterocolitis, in whom it has been observed that the carrier state, as well as the proportion of resistant isolates following therapy, was enhanced. Because of this and because of lack of evidence of clinical efficacy, it is currently recommended that antibiotics not be used for intestinal (non-bacteremic) infections due to Salmonellae.

Numerous studies have demonstrated that the selection of drug-resistant bacterial species may occur through the unrestricted "therapeutic" use of antibiotics. This is probably the clinically most important mechanism listed in Table 7. The change in bacterial flora may result in secondary or superinfection with resistant bacteria. For example, the basis for most clinical failures in 146 patients treated with methicillin for severe staphylococcal disease was superinfection due to gram negative rods.[13] An excellent and clear presentation of this problem is to be found in a review by M. Finland.[3]

Depressed host responses to infcetion oecur in many morbid conditions: neutropenia, diabetes mellitus, uremia, malignancies, treatment with antineoplastic and immunosuppressive agents and alcoholism, to name a few.

Neutropenia represents an indication for the prompt recognition and therapy of systemic infection. The following case is cited to illustrate the difficulties in this setting. A 57-year-old white male patient was admitted to our hospital in December, 1973. He was hospitalized elsewhere for the three months preceding transfer for an unexplained anemia. This transfer was precipitated by a one-day-long febrile illness and a blood pressure fall from 130/90 to 85/55. On admission, the patient was prostrate, but responsive. Physical examination revealed no localized signs. The peripheral blood smear and count were diagnostic of acute myelomonoblastic leukemia, with myeloblasts predominating on differential count. A blood culture was drawn and empiric therapy with carbenicillin and gentamicin was started immediately after admission. The bacteriologic data from this patient are shown in Table 8. The sepsis was caused by Pseudomonas aeruginosa. Forty-eight hours after initiating therapy, the patient became afebrile.

On the seventh day of treatment, fever recurred and symptoms and signs of pneumonia appeared. The patient expired shortly thereafter. Cultures of the blood and sputum showed the same microorganism, as evidenced by pyocine typing. The reisolated pseudomonas required three times as much carbenicillin to inhibit its growth as compared with the original isolate.

Table 8

Typing and Antibiograms of Ps. Aeruginosa Isolates During a Fatal Infection[a]

Date	*Culture*	*Pyocine Type*	*MIC[b]* *CB*	*G*	*CO*
10-18-73	Blood	J-7	50	5	10
10-18-73	Treatment with CB + G started[c]				
10-20-73	Blood	0			
10-25-73	Blood	J-7	150	5	10
10-25-73	Sputum	J-7	150	5	10

a) In a patient with acute myeloblastic leukemia. The total (segmented) polymorphonuclear leukocyte count was 60/mm.^{3} blood at the onset of fever.

b) MIC = minimal inhibitory concentration as mcg./ml.; CB = carbenicillin, G = gentamicin, CO = colistimethate.

c) CB 5g. IV every four hours and G 1.25 mg./kg. IV every eight hours.

In this case the treatment failed, despite the prompt recognition of Pseudomonas aeruginosa sepsis, and no delay in the initiation of therapy with bactericidal and synergistic antimicrobials. Apparently, the severity of the underlying acute leukemia with profound granulocytopenia thwarted the eradication of infection and allowed the *in vivo* development of partial resistance to carbenicillin. The initial improvement (11-20 to 11-25) might have been sustained longer with granulocyte infusions rather than with a change or modification of antimicrobial therapy.

Table 9

The Profile of an Antibiotic: Ampicillin

Indication	Result of Treatment *Effective*	*Ineffective or Drawback*
Urinary tract infection	E. coli enterococci Proteus mirabilis	Klebsiella pneumoniae, Ps. aeruginosa, indole (+) Proteus; Prostate level low
Meningitis otitis media (young children)	D. pneumoniae H. influenzae N. meningitis	serum: CSF = 10: 1 (levels)
Gonorrhea	3.5g. + probenecid	10 per cent failure
Chronic Bronchitis (exacerbations)	D. pneumoniae H. influenzae N. meningitidis	superinfection by resistant gram negative bacteria, staphylococci and fungi
Typhoid fever	biliary level high clears the carrier state	occasional strains resistant (through R factor)

Newer Antibiotics

Newer agents may be better understood by comparing them to their more established congeners. This approach was selected for discussion rather than a systematic review of newer antibiotics.

Table 10

Comparison of Ampicillin and Amoxicillin

Characteristic	*Ampicillin*	*Amoxicillin*
Antibacterial spectrum	E. coli, Pr. mirabilis, enterococci, pneumococci, H. influenzae, Neisseria, Shigellae	same as ampicillin, except Shigellae *not* inhibited
gi absorption	50 per cent	90 per cent
diarrhea	frequent	? less frequent
allergy	yes	yes
pediatric dose (mg./kg./day)	50-100	20-40

Amoxicillin is closely related to ampicillin. A critical review of the frequently used ampicillin is offered in Table 9. The positive aspects, as well as drawbacks are listed. Neither drug, amoxicillin nor ampicillin, resists the action of penicillinase. Both agents are therefore ineffective in most staphylococcal infections (Table 3). Table 10 contrasts these two antibiotics. As can be seen, amoxicillin is better absorbed from the gastrointestinal tract which accounts for the differences in the dose required to produce comparable systemic levels. This characteristic may hopefully result in reduced frequency of one side-effect, diarrhea. Amoxicillin may therefore be preferred for the ambulatory pre-school pediatric patient (example—otitis media suspected to be due to H. influenzae). For the adult, in any of the conditions listed in Table 10 (urinary infection, gonorrhea or bronchitis), either antibiotic may be equally effective. Since at this time amoxicillin is available only as an oral preparation, intravenous ampicillin should be used in the treatment of meningitis and Salmonella enteric fever.

The frequent phlebitic complication of intravenous cephalothin, as well as its poor intramuscular tolerance are well known. Cefazolin and cephapirin, two related cephalosporins were developed to provide more acceptable alternatives. The three parenteral cephalosporins are compared in Table 11. Cefazolin appears to possess favorable pharmacologic traits: it is well tolerated intramuscularly, and it may cause less

phlebitis and achieves higher blood levels. Cephapirin is practically indistinguishable from cephalothin, except for a possible reduction in the rate of phlebitis. There is little, if any, significant difference between the antimicrobial spectra of these agents.

Table 11

Comparison of Parenteral Cephalosporins

Characteristic	*Cephalothin*	*Cefazolin*	*Cephapirin*
Spectrum	← gram positive cocci, gram negative rods (except Ps. aeruginosa and Serratia). →		
IM Tolerance	poor	good	borderline
Phlebitis	frequent	? less frequent	? less frequent
CSF levels	low	low	low
Dose[a]	1	1/2	1

a) To achieve comparable serum levels.

Minocycline is a new tetracycline. It achieves higher circulating levels than most of the members of the same family. It is also more effective against staphylococci. Preliminary studies also show greater activity against anaerobic bacteria. Minocycline has a peculiar quality of achieving high salivary levels and was able to eradicate the meningococcal carrier state. Only rifampin is similarly effective. It should be noted that despite the sensitivity of meningococci and the effectiveness of penicillin in treating the disease caused by this organism, penicillin is ineffective in eliminating the carrier state!

Tobramycin is a newer aminoglycoside, similar in its antibacterial spectrum to gentamicin. Tobramycin seems to be more effective against Pseudomonas aeruginosa, i.e. the MIC is four times lower on the average than that observed with gentamicin. Otherwise, their antibacterial spectra are equally broad for gram negative rods. As to drawbacks, the two antibiotics are similar: their effective dose is close to a toxic one.

The synergistic combination of trimethoprim and sulfamethoxazole (in a fixed ratio of 1:5) was already mentioned. The drug is approved in the United States for chronic urinary tract infections. On the positive side, the antibacterial spectrum is quite broad and the two sites of action (see Figure 1) discourage the emergence of drug-resistant bacteria. It is well tolerated when the kidney function is normal, and very high levels of trimethoprim may be achieved in the prostate. However, Pseudomonas aeruginosa, most enterococci, and anaerobic bacteria are resistant to this drug combination.

The Strategy of Antimicrobial Treatment

Table 12 outlines our general approach to the use of antibiotics. Many of the issues were discussed under the analysis of failure of antimicrobial treatment (Table 7). The prudent approach is to initiate treatment based on etiologic documentation.

Table 12

Suggestions for the Use of Antibiotics

1. Established infections guided by sensitivity of organism, or in limited instances of suspected infections.
   Avoid "Prophylaxis"[a]
2. Obtain appropriate material for smear and culture before first dose.
3. Re-evaluate drug during therapy.
4. Continue for adequate course.

a) Except in instances listed in Table 14.

The most frequent practical question confronting the infectious disease consultant is "what to use in unknown sepsis." This question has no simple answer. The rational approach consists of the analysis of the clinical clues and the available positive or negative microbiologic data concerning the case. One aims at recognizing the site of infection and at reaching a tentative diagnosis. The next step is the definition of the most probable bacterial etiology, which in turn, influences the selection of initial empiric therapy, pending culture results. A systematic analysis of many clinical situations, site by site, including modifying clinical circumstances, the suspected diagnosis and the antibiotic most likely to be effective, is offered in a previously published guide to antimicrobial therapy.[6]

Occasionally, the site by site search for the origin of sepsis may remain fruitless. Preliminary bacteriologic data may suggest an etiologic diagnosis. The selection of antibiotic in this setting is outlined in Table 13. An all too frequent clinical situation is the patient who falls into the category of "unknown-etiology." This is particularly a problem in the hospitalized patient with compromised resistance. An example was previously presented. Empiric treatment should be directed in this instance primarily toward gram negative rods since they predominate in the hospital environment (see below).

Other circumstances which are important include whether the infection was acquired in the community or in the hospital. For example, the pneumococcus causes most bacterial pneumonias acquired outside the hospital, while pneumonias due to gram negative rods, staphylococci and opportunistic fungi occur mostly in the hospital-

Table 13

Selection of Antibiotic in Sepsis

Organism	*Antibiotic*	*Comment*
GRAM POSITIVE COCCI	Penicillinase Resistant Penicillin, Cephalothin	(IE: Nafcillin or Oxacillin)
GRAM NEGATIVE COCCI	Penicillin G	Aspirate and Smear Petechiae
GRAM NEGATIVE BACILLI	Gentamicin and Cerbenicillin	When Neutrophils Depressed
UNKNOWN	Cephalothin and Gentamicin	Plus Clindamycin if Abdominal or Pelvic Focus Suspected

ized patient. Anaerobic pneumonia is associated with conditions which may predispose the patient to aspirate. The acuteness or chronicity of infection have etiologic implications. The age of the patient, the kind of procedures to which he has been subjected (i.e.: catheterizations)—all must be considered.

The initial choice of antimicrobial therapy for the putative pathogen should be based on: (a) the published experience of others concerning recent bacterial isolates and their antibiotic sensitivities and, (b) on the corresponding data from one's own hospital laboratory. A bit of local hospital epidemiology is extremely helpful since each hospital has its own pathogenic flora, which may or may not entirely resemble that described in the literature. In the future computers may assist us in storing and retrieving the data from one's own hospital laboratory. As the report is sent to the patient's ward it would also be stored in the computer's memory. One may then ask the computer to recall the local experience in a particular clinical setting. Such a system is being developed at our hospital and similar systems are in use elsewhere.

Re-evaluation during therapy is essential, particularly when the initial antibiotic selection was "empiric." For example, in a hospitalized, elderly patient with pneumonia, whose stained sputum shows gram negative, relatively thick rods with capsules, treatment aimed at Klebsiella pneumoniae, E. coli or Serratia marcescens is in order. A combination "covering" these organisms is cephalothin and gentamicin. If the laboratory reports a sensitive Klebsiella pneumoniae to both of these agents, gentamicin may be discontinued, since cephalothin is probably more effective and is safer in this setting.

The prophylactic use of antimicrobial agents is a "two-edged sword," which may be less than optimally effective and may favor superinfection with resistant bacteria. A list of appropriate targets for attempts at prophylaxis is offered in Table 14.

Table 14

Prophylactic Antibiotic Treatment

Condition	*Treatment*
Rheumatic fever	Penicillin (PCN) G[a]
Valvular heart disease	PCN G and Streptomycin[b, c]
Prosthetic heart valve	Penicillinase resistant Penicillin at operation
Venereal disease (post exposure)	PCN G and Probenecid[d]
Tuberculosis	Isoniazid alone, 12 months
Meningococcal carrier state (Pharynx)	Minocycline or Rifampin[e]

(a) 250 mg. tablet, twice daily, continuously.

(b) Dental manipulations: procain(pr) PCN G one million u IM one hour before and after procedure, followed by the same dose daily for two days. In case of allergy, erythromycin orally, two g./day in divided doses, on the day before, day of, and two days after procedure.

(c) Urologic manipulation or proctosigmoidoscopy: 1.2 million u pr. PCN G IM and one g. Streptomycin IM one hour prior and at 12 hourly intervals post procedure for two days. In case of allergy, tetracycline orally as above (b) for erythromycin.

(d) Pr PCN IM 4.8 million in total, as two doses into different sites at the same visit, with one g. Probencid orally just before injections. In case of allergy, tetracycline HCl: 1.5g. by mouth at once, followed by 0.5g. by mouth four times daily, for four days, totalling 9.5g.

(e) Minocycline 100mg. bid or rifampin 600mg./day for three days. (Vertigo reported with some batches of minocycline; rifampin therefore preferred).

The prophylaxis of endocarditis in patients with pre-existing valvular heart disease is an accepted practice during dental, urogenital and proctosigmoidoscopic procedures. Alternative drugs for use in this setting can be found in a recent review.[14] The prophylaxis of infections affecting prosthetic heart valves is more controversial and the reader is referred to the review article by Finland.[2] As for venereal disease and tuberculosis, the United States Public Health Service publishes, periodically, guidelines in the "Mortality and Morbidity Weekly Report," available from the Center for Disease Control, Atlanta, Georgia 30333. Meningococcal prophylaxis is briefly discussed under "Newer Antibiotics."

Antibiotic prophylaxis for "clean" surgical procedures is extremely controversial. Neomycin is frequently used for "bowel sterilization," but this aminoglycoside does not affect anaerobes, which outnumber the coliform flora by 1000:1. The dangers of increasing the proportion of R-factor-containing intestinal bacteria or the promotion of staphylococcal superinfection are important considerations. Recently, Nichols and co-workers

(cited in reference number nine) introduced a combination of neomycin and erythromycin base (3g. of each by mouth) on the day preceding colonic surgery. This resulted in the depression of both aerobic and anaerobic intestinal flora and in their experience reduced the frequency of suppurative postoperative complications.

There is some enthusiasm among surgeons for the use of preoperative antibiotics aimed at the particularly vulnerable period, extending from the beginning of surgery to the recovery of normal cardiovascular and respiratory physiology following surgery. This is accomplished by a parenteral dose of an antibiotic one hour before surgery, and repeated doses given during the operation and during the recovery period. This therapy is usually discontinued when the patient leaves the recovery room.[1] The instances when this may be helpful include: (a) a procedure in which there is a risk of massive bacterial contamination (i.e. ruptured abdominal viscus), (b) surgery in a patient with severe underlying illness (metabolic acidosis, malignancy, cirrhosis of the liver, etc.), and (c) in specific unusually extensive procedures which severely compromise the patient's normal defenses and therefore favor infection, as in cardiac, neurosurgical, orthopedic and vascular operations.

In summary, we have attempted, as we outlined in the introduction, to present our philosophy concerning antimicrobial treatment. We have not avoided areas in which we are often forced by clinical circumstances to "take a stand." There are some instances in which "short cuts" may be appropriate, or even necessary. These clinical solutions, however, must be monitored by appropriate and timely microbiological tests. We hope our suggestions will help the clinicians avoid failures in therapy.

A list of references may be obtained by writing The Journal.

Profile Of A Guru Follower

WHAT sort of an American drops out of the conventional life style to follow a guru?

He or she almost always has a background of chronic unhappiness and unsatisfactory parental relations. He is relatively young and likely to be above average in education. Chronic or recurrent feelings of depression, anxiety states, painful experiences of hurt pride and anger, shyness, low self-esteem, poor relationships with the opposite sex, the absence of goals and direction, and the feeling of being out of step with peers and with parental expectations are common symptoms.

These were the findings of a New York City psychiatrist who spent five to ten hours a week for more than two months interviewing devotees of a Central Park guru known simply as Baba.

Baba spent 15 hours daily sitting on a bench near the park and his adherents would sit on the sidewalk in front of him. Alexander Deutsch, M. D., from the Mental Health Unit, New York University Health Service, and the Department of Psychiatry, New York University Medical Center, talked with the followers as they sat at the guru's feet.

Doctor Deutsch's report is in a recent issue of *Archives of General Psychiatry,* a publication of the American Medical Association.

Transient Cerebral Ischemia And Carotid Vascular Disease

James V. Gainer, Jr., M. D.; and G. Robert Nugent, M. D.

Occlusive vascular disease of the extracranial arterial supply to the brain is a common cause of neurologic dysfunction. The syndrome of transient, short-lived alternations in neurologic function is often ignored, both by patients and physicians. A transient cerebral ischemic attack (TIA) has been defined as an episode of neurologic dysfunction which lasts for a few minutes to 24 hours at most, and then completely clears.[1] If the deficit does not resolve but leaves minimal or major residual it is designated as a cerebral infarction or completed stroke.

Cerebral ischemic syndromes due to occlusive vascular disease account for about 75 per cent of patients with strokes.[2] In two-thirds of these patients the responsible lesions will be in the extracranial carotid arteries. The remainder are in the vertebral system and the intracranial arteries. It has been noted that at least 75 per cent of patients with carotid territory strokes have had one or more antecedent TIA's.[3] In 1972, the number of strokes reported in West Virginia was about 4,500.[4] Applying the above statistics to this figure, it follows that 2,260 patients had strokes caused from lesions in the extracranial carotid system, and 1,650 patients had warning TIA's preceding the stroke. Approximately 1,100 patients would be expected to have had strokes in the area of supply of the vertebrobasilar system and 825 of these patients had warning TIA's. It is this group of patients with a premonitory warning syndrome who are most salvagable with appropriate diagnosis and treatment.

In the main, occlusive vascular disease is caused by arteriosclerosis. Deposition of cholesterol occurs at bifurcations, and plaques form in the intima. These encroach upon the lumen of the vessel and eventually reduce blood flow to the point of minimal compensation by the patient. Any factor which results in a transient

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Figure 1a. Right retrograde brachial arteriogram demonstrating severe stenosis involving the carotid bifurcation. Serial views in two planes demonstrated no intracranial abnormalities. Patient had transient left hemiparesis. A loud bruit was present over the bifurcation. (Figure 1b). Postoperative arteriogram of patient in 1a.

flow reduction may produce symptomatic cerebral ischemia. Ulcerations often occur in the plaque and small pieces of atheromatous material may break off and be carried downstream in the arterial system. Roughened areas of plaques may serve as a nidus for the deposition of platelet aggregations. These too may break off and form emboli. These lodge in small cerebral vessels, produce local ischemia, and then break up, allowing resumption of blood flow. At present, the most popular theory for the etiology of TIA's is the "embolic" theory.[5,6]

The major site of plaque formation in the extracranial carotid arterial system is at the bifurcation of the carotid artery. The plaque usually involves the common, internal, and external carotid vessels, circumferentially narrowing their internal diameters. The usual plaque extends only for one to three cm. upward into the internal carotid. In the vertebral system, extracranial plaque formation occurs most commonly at the origin of the vertebral artery from the subclavian.

With carotid ischemia, the patient will experience motor and/or sensory dysfunction, visual disturbance, or dysphasia. Any or all of these deficits may occur. The motor dysfunction and/or sensory dysfunction is on the contralateral side, and is usually most prominent in the upper extremity. Visual disturbances take one of two forms: (1) monocular blindness on the side of the carotid disease, or (2) contralateral hemianopia. In one study it was reported that 39 per cent of patients with symptomatic carotid stenosis had transient episodes of monocular blindness; others have not found it this frequently. It occurs on the side of the carotid stenosis, and usually is due to embolization to the retinal arteries. These episodes are often ignored by the patient and the physician must inquire specifically for them. Contralateral hemianopia implies hemispheric ischemia, often involving but not limited to the temporal lobe area, and is binocular. Ofter the patient is unaware of the existence of a hemianopia. Dysphasia signifies dysfunction of the speech center located in the dominant hemisphere (usually left). It is characterized by an inability to speak certain words, or in speaking words other than those intended. It is to be differentiated from the slurring of speech (dysarthria) which occurs with vertebrobasilar insufficiency.

Following the TIA the patient's neurological examination is usually normal. The cardinal diagnostic feature is the presence of a bruit over the carotid bifurcation. The history of the event and the presence of a bruit over the carotid artery are the prime points in arriving at a diagnosis.

Vertebrobasilar insufficiency is manifested by a combination of the following: diplopia; dys-

Figure 2a. Left carotid arteriogram demonstrating stenosis involving the bifurcation and the proximal internal carotid. Serial views in two planes demonstrated no intracranial abnormalities. Patient had transient right hemiparesis and transient left monocular blindness. A loud bruit was present over the bifurcation. (Figure 2b). Postoperative arteriogram of patient in 2a.

arthria; ataxia; single or multiple cranial nerve palsies; vertigo; unilateral, bilateral, or alternating motor or sensory loss; drop attacks; severe dysphagia; and visual disturbances.

Drop attacks are an interesting phenomenon. The legs suddenly become weak and the patient falls without losing consciousness. Usually strength is regained immediately. Specific questioning will often elicit a history of ataxia and vertigo. Following the episode the neurologic status may well be normal. A bruit heard in the supraclavicular area at the base of the neck is good evidence for a stenotic lesion in the vertebral artery and/or the subclavian vessel.

Other Causes of Transient Ischemia

In the absence of bruits, other causes must be considered. Atheroma may be present in the intracranial vessels and produce the same syndrome. Occasionally a bruit from the ophthalmic artery will be heard over the eye. However, intracranial stenoses do not usually produce audible bruits. Postural hypotension may result in transient cerebral ischemia, and is easily checked for. Hypotensive and psychotropic drugs commonly cause this.[8] A hypersensitive carotid sinus syndrome may be triggered by massage, and result in hypotension with vertigo, syncope, and visual symptoms.

Hypoglycemia in association with diabetes or the treatment of diabetes will produce similar symptoms. Hypercalcemia has also been implicated. Meningovascular syphilis, while rare today, must be considered. Giant cell arteritis will produce transient monocular visual loss. An elevated sedimentation rate and tenderness over the temporal artery are helpful clues to this diagnosis, which is confirmed by temporal artery biopsy. The visual symptoms of migraine without a subsequent headache will stimulate a TIA. Careful historical search for migraine in the patient or his family may aid in the diagnosis. Also, the visual phenomena of migraine do not disappear when the eye is closed whereas with the TIA they do. Migraine is predominantly a disorder of young people while cerebral vascular disease affects an older age group.

Anemia, polycythemia, and increased platelet agglutination have all been implicated as a cause of transient ischemia. Dysproteinemias are a rare cause.[8]

Embolization from the heart is not uncommon, and often the emboli are thrown into the cephalic circulation. A recent myocardial infarction or the presence of a cardiac arrythmia or murmur should alert the examiner to this possibility. Cerebrovascular occlusion in association with the use of oral contraceptives has been reported.[9]

Seizures may at times simulate TIA's, particularly minor sensory seizures. A careful history will help in this regard.

In patients suspected of having occlusive vascular disease, arteriography is the procedure of choice. This can be done by retrograde dye flow through the brachial arteries, by catheter through the femoral or axillary arteries, or by direct puncture of the involved artery. Complete arteriography should be done on all patients who are candidates for surgical correction of their stenoses. It is most important in these instances to visualize the intracranial circulation as well as the extracranial neck vessels. Obviously, if there is a more severe intracranial stenosis, an extracranial endarterectomy in the neck will accomplish nothing.

Three Categories of Treatment

Vasodilation: Treatment of TIA's secondary to occlusive vascular disease falls into three categories. In the first group are those who are not candidates for either surgery or anticoagulation. Treatment with vasodilators such as papaverine may be of some benefit in these cases, as well as aspirin to decrease platelet adhesiveness.

Anticoagulation: The next group are those for whom anticoagulation is selected. The treatment of choice for a severe stenosis is endarterectomy; anticoagulants cannot enlarge a narrowed arterial lumen. They may, however, help to prevent a stenosis from becoming an occlusion by their minimal effect on the development of an arterial thrombus. Patients whose lesions are beyond the reach of surgery, e.g., in the carotid siphon or other intracranial vessels, may be candidates for anticoagulant therapy. And, the occasional patient who has some general contraindication to surgery may be anticoagulated. Usually, if the patient cannot tolerate surgery he cannot tolerate anticoagulation either. Considerable interest has been manifested in the past few years in the use of aspirin to decrease platelet adhesiveness and thus prevent platelet aggregations from forming on the ulcerated plaques. Certain patients who are not candidates for surgery and also present contraindications to anticoagulation (bleeding diatheses, hypertension, unreliability, etc.) may benefit from regular aspirin dosage.

Surgical Correction: Since the majority of carotid territory TIA's are due to extracranial carotid occlusive disease, many of these patients will benefit from surgical correction of the stenoses in the cervical portion of the carotids. Over

the years, considerable experience with this procedure has accrued and the indications are now well defined.[10] Patients with significant stenoses (greater than 50 per cent) and/or ulcerated plaques who have had TIA's should undergo surgery. Patients who have some residual deficit following the ischemia should wait for four weeks before surgery. If the artery is totally occluded endarterectomy will do no good, and may be harmful. Patients with vertebrobasilar symptoms and carotid stenoses may benefit from carotid endarterectomy to increase the total cerebral blood flow. At present, patients with asymptomatic stenoses are not considered for surgery, unless they are to undergo major surgical procedures elsewhere in the body where there is a danger of hypotension. In these cases prophylactic endarterectomy is a valid procedure. These patients should have a thorough evaluation of their neurologic status prior to surgery, as well as angiographic visualization of the intracranial circulation and the neck vessels.

The surgical procedure consists of an arteriotomy with insertion of a shunt to bypass the affected area. The plaque is then carefully dissected from the artery and all loose flaps of intima are secured with suture. The arteriotomy is then closed, the shunt removed, and flow re-established through the vessel. The area of denudation re-endothelializes and forms a smooth intimal surface. Recurrence of the stenosis to any significant degree is very uncommon.

The mortality for operative correction of carotid stenoses in most series in recent years is about two to four percent with neurological deterioration in about five per cent.[11,12,13] Most of the patients with neurological deterioration postoperatively recover function early. In reviewing our last 100 cases we have an operative mortality of three per cent. Two of the patients died in the postoperative period of causes unrelated to their surgery but were included in the operative mortality figures. Transient neurologic deficits occurred in 11 per cent. Permanent neurologic deficits occurred in five per cent. While any morbidity or mortality is disheartening, these figures are still far superior to those groups receiving no treatment.

Occlusive disease of the extracranial arterial supply to the brain is a major cause of stroke. Identification and treatment of premonitory transient ischemic episodes can very often prevent the development of severe, fixed neurologic deficits.

A list of references may be obtained by writing The Journal.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Cryptococcal Meningitis

Frank E. Medford, M. D.

Cryptococcal infection of the central nervous system is an uncommon illness, occurring more often in those with predisposing diseases such as lymphomas and illnesses associated with immunosuppression or the administration of corticosteroids.[1] Suspicion, therefore, is raised relatively early in these situations. When the infection occurs in otherwise healthy people, however, the diagnosis may not be considered for some time.

The following case is presented to reiterate the importance of including the diagnosis of cryptococcal infection in those with headache. The case also demonstrates that some patients can tolerate full courses of therapy with Amphotericin-B and that the prognosis is better if there is no coexisting disease.

Case Report

A 35-year-old woman was admitted in October, 1973 with worsening headache and dizziness for two months. Complete neurological examination one month after onset revealed no abnormalities. Shortly thereafter she noticed pain in the back of the neck, in the arms and legs, and noticed blurred vision in the right eye.

In 1962, she had a generalized convulsion and subsequent evaluation revealed no cause. Three months prior to admission she was shot in the left leg and suffered three rib fractures but no head injury.

There was no history of malignancy, treatment with corticosteroids or immunosuppressants.

She was moderately uncomfortable, complaining of headache and answering questions slowly. The positive physical findings were bilateral papilledema and one tiny hemorrhage in the left disk. The remainder of the physical examination, including careful neurologic examination, was normal.

The following laboratory values were normal: CBC, sedimentation rate, SMA 14, urinalysis, SMA 6, brain scan, skull x-ray, chect x-ray and cytologic examination of cervical smear.

A right carotid arteriogram showed mild vascular spasm in the region of the bifurcation of the internal carotid artery, possible slight ventricular enlargement but no evidence of a mass lesion.

The Author

- **Frank E. Medford, M. D., Riverside Hospital, Newport News, Virginia.**

Pneumoencephalography by ventricular puncture showed mild dilation of both lateral ventricles and the third ventricle. At no time was the fourth ventricle visualized but a small amount of air was seen in the aqueduct. The ventricular fluid had 15 RBC/cmm., 14 WBC/cmm., 2 lymphs, 2 segs, 54 mg. per cent protein, 40 mg. per cent sugar and showed budding yeast-like organisms, which on culture proved to be cryptococcus neoformans.

The patient was started on Amphotericin-B, 20 mg./day intravenously, and by one week was taking 50 m./day without symptoms. The dose was continued every day until 3.0 gm. had been given. At no time did her BUN rise above 25 mg. per cent, and the only complication was a mild normocytic, normochromic anemia which appeared near the end of the therapy. By the seventh day of treatment her papilledema was noticeably less, and the optic disks appeared normal by six weeks. Her headache disappeared by the fourth week and at eight weeks she felt well generally.

She was readmitted in January, 1974 and repeat pneumoencephalogram was normal with the spinal fluid having no RBC, 22 WBC/cmm. with 16 lymphs and 6 segs, protein 56 mg. per cent and sugar 46 mg. per cent. No organisms were seen or cultured. Repeat of all her laboratory studies were normal except for Hgb 10.8 gm. per cent with Hct 31.5 vol. per cent. The RBC were normocytic and normochromic. Two months later the Hgb and Hct were normal without specific therapy and she has remained well to date.

Discussion

This case clearly demonstrates the time lag in diagnosing cryptococcosis of the central nervous system. There is little doubt that the infection was the cause of her headaches, but it was only after the appearance of papilledema that she was admitted for evaluation. Headache is the most common symptom and may not be severe.[1] The search for a brain tumor seemed appropriate,

although papilledema without localizing neurological signs might suggest another possibility. The failure to outline the fourth ventricle and only partial visualization of the aqueduct of Sylvius suggests the possibility of toruloma. Swelling in the area of the aqueduct, however, could have produced such an obstruction. Finding the organism on India Ink preparations and culture was fortunate in this case.

Amphotericin-B is effective in treating cryptococcal meningitis.[2] The response to Amphotericin-B in this case was gratifying and somewhat unusual. The fact that those without coexistent disease have a better prognosis[1] could have significantly affected the outcome in this case. The side effects of this drug are well known and have led others to use 5-Fluorocytosine.[3,4] However, 5-Fluorocytosine is not without hazard, including aplastic anemia,[5] and organism resistance may occur.[6] The drug is easier to administer and has fewer side effects, but it is difficult to determine from the literature if it should be considered the primary or initial drug. It certainly would be very useful in those cases in which Amphotericin-B could not be used. Combined with Amphotericin-B, 5-Fluorocytosine may also prove useful in those severe, resistant or relapsing cases.[3,7]

Summary

A case of cryptococcal infection of the central nervous system is presented, characterized by prolonged headache and absence of coexistent disease which would raise early suspicion of the infection. The patient tolerated Amphotericin-B therapy, administered every day to a 3.0 gm. total dose with the only side effect being a mild anemia which disappeared rapidly. The drug of choice for the disease may prove to be 5-Fluorocytosine, but this has yet to be demonstrated. The prognosis in this illness is again demonstrated to be better in the absence of coexisting diseases with altered immunity.

A list of references may be obtained by writing The Journal.

Boat Painting Hazards

With the approach of Spring in much of the land, amateur yachtsmen are readying the skiffs, sailboats and motor launches for another summer on the streams and lakes.

This often involves scraping and a fresh paint job. And American physicians know that they will get rush calls to treat boatsmen who ignore safety rules of handling, maintenance and refurbishing.

Essentially all paints except latex paints, if applied in confined spaces or small rooms with little or no exchange of air, are likely to cause central nervous system effects—headache, dizziness, disturbance of vision, loss of equilibrium, and in severe instances, unconsciousness, the American Medical Association points out. Also, most paints are combustible and should be kept away from open flame, sparks and heat.

Special Article

A Dental Health Delivery System For Mental Health Institutions

Lester Hugh Roth, D. D. S.

PROCEDURAL methods for effecting dental care in a state hospital are much unlike any the general practitioner might encounter. Primarily, the unusual behavior patterns which one might encounter supersede any standardization or preconceived acceptable plan for treatment.

There exists an overall need to attend the patient's total physical requirements, as well as the patient's mental state, and this is the effort to which this system is dedicated.

Considerations

As in the general hospital, the patient history is of extreme importance; yet with the mental patient, even more care must be exercised:

(1) Medications which the patient is almost sure to be receiving may cause conflict with the treatment plan which the attending dentist may wish to follow.

(2) Behavioral patterns which are not only unpredictable but also significant, contribute disturbing factors and difficulty to the management of the potential patient.

(3) Physical dangers may present themselves to both the attending personnel and patient.

(4) Inadvertent actions by the patient and other persons in contact with him following oral surgical procedures may cause complications to arise due to varied behavioral patterns. These irrational acts may cause a multitude of postoperative complications such as hemorrhaging, infection, inadvertent blood loss, delayed healing and further difficulties in planning subsequent procedures.

The above cited instances are reserved for those exceptional patients rather than the population as a whole, as there does exist a group of patients within the hospital population that—with "TLC"—are amenable to careful planning and treatment.

On the other hand, earlier childhood experiences of fear and trepidation associated with dental care provide a particular problem for the mental patient. The suggestion of being treated by the Dental Department, in many instances, has resulted in an extreme upset of the patient's norm even though he had been progressing reasonably well.

The Author

- **Lester Hugh Roth, D. D. S., Weston State Hospital, Weston, West Virginia.**

Introduction

Present hospital admission evaluation already includes a departmental review of systems. An oral hygiene survey can be conducted by means of a preliminary screening and subsequent care, and can be *delivered to the patients as contained herein.*

Paramount in an institution such as Weston State Hospital is the development of a method of delivery and care. During a rather exhaustive study initiated over the past 12 months, such a method of delivery has been established in a variety of settings with the utilization of personnel, armamentarium and innovative supplementary techniques in cooperation with those of our staff concerned with the alleviation of the longstanding and acute oral problems disclosed upon examination.

The developmental experience of the novice dental team has been one far removed from such problems as could be encountered in private practice and as observed during customary medical-dental training.

The effectiveness of the pilot plan has been credited to a combined effort of staff development and the administration, together with unselfish devotion of time and personal risk on the part of the staff assigned to this department.

It is incongruous to witness the difficulties of attending a significant proportion of the hospital population who desperately require care. Specifically, many of the physical problems which are associated with mental patients constitute a most unique challenge. The presentation of

the patient to accomplish care involves myriad technicalities—primarily that of conflict with medication schedules, availability of related ancillary personnel and the usual evaluation of the patient from the standpoint of general medical and laboratory findings. The attending dental team is responsible for treatment in an atmosphere of care which has no prescribed techniques or schools of teaching methods.

During the study of an approach to establishing modes of treatment, we have been extremely successful in attending to virtually all types of patients in this institution by establishing classifications of "where," "when," and "how" the individual could best be served.

The Team

The team, as we are now represented, consists of a physician, dentist-anesthetist, registered nurse, psychiatric aides and secretary. These people are the primary group responsible for effecting treatment (delivery). During the summer months, a supplemental dental hygiene student from West Virginia University has been observing our techniques and also has been effective in the development of our plans. The back-up general medical staff, technicians and administrative personnel have given their utmost support; without this concerted effort and interest our present program would be totally ineffective.

Patients are attended as follows:

Bedside and Ward Treatment: This method of delivery is accomplished with portable equipment transported to patients with restricted physical and/or mental conditions. Much can be done to improve their periodontal state and by providing minor or oral surgery, diagnosis and palliative treatments with the attending team.

Office and/or Clinic: (1) Preventive and maintenance services in the office environment as have been customary for some patients are continued here in the normal manner. (2) Both the dental chair and "operating table" combination have proved of infinite value in our hospital in recent months, and have been of particular efficacy for our varied problems and needs, rather than the typical "chair" clinic approach.

Operating Room: (Operating table or recovery carts and hospital beds) For the poor-risk patients, as well as the highly agitated and physically hyperactive individuals, this location is the most effective choice.

Special consideration: (1) The confined and/or agitated patients require special consideration which this department has already developed in a team approach by pre-medicating the patient and attending him at the optimum hours of quiescence: that is, day or night, as may be indicated. (2) The unclassified patients, such as the tuberculous and leutic, will require consultation with other hospital departments rendering care to such populations. (3) The alcoholic and drug addicted patients, to date, have also been attended with moderate success in our hospital by the present personnel.

Present classification as to ease of treatment is as follows:

A.	Any time attending doctor is available.
A.M.	Considering physical status and agitation of the individual on a selected basis.
P.M.	Receptive, non-agitated patients.
B.	Bedridden.
S.	Solitary seclusion.
C.R.	Constant restraint.
R.	Refered to outside private care.
C.P.	Clinic patient.

Description of Codes:

A.—Patient may be attended at any time.

A.M.—Many patients are catatonic and, due to physical as well as mental status, are more receptive in the A.M.

P.M.—Receptive, non-agitated patients who are classified as diametrically opposite to those patients that do not accept being examined or attended in the Dental Clinic due to apprehension or previous bad experience of dental care.

B.—The infirm patient who cannot be brought to the Clinic.

S.—The solitary seclusion patient who is of a definite disruptive nature except in his own surroundings.

C.R.—Patients who are in restraints for emotional status, the physically handicapped, or those who exist in feeder chairs—all are prevented from being attended anywhere except at bedside.

R.—Referral patients who, up to the present, have received outside care due to lack of time and/or services in our hospital.

C.P.—Elective clinic patients who can be routinely cared for in an office or clinic environment even though sedation may be required.

The above described approach is a working arangement already established at Weston State Hospital and, although not completely refined, is and can be workable.

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Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

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Overdosage may cause a curare-like action, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted. Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

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Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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Mild anticholinergic action—Pro-Banthīne® Half Strength, 7.5 mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

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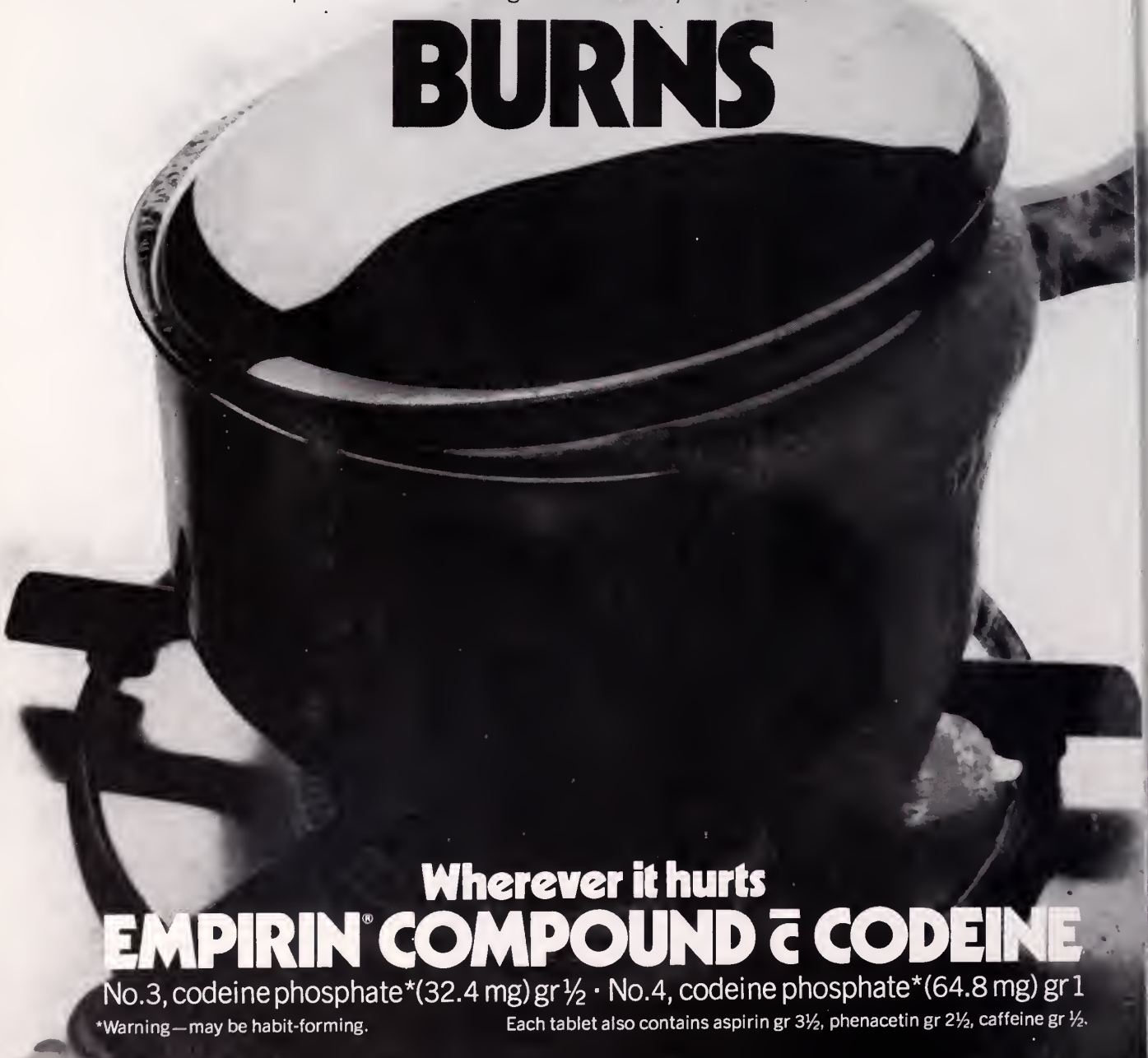

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Each tablet also contains aspirin gr 3½, phenacetin gr 2½, caffeine gr ½.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: **Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired.** Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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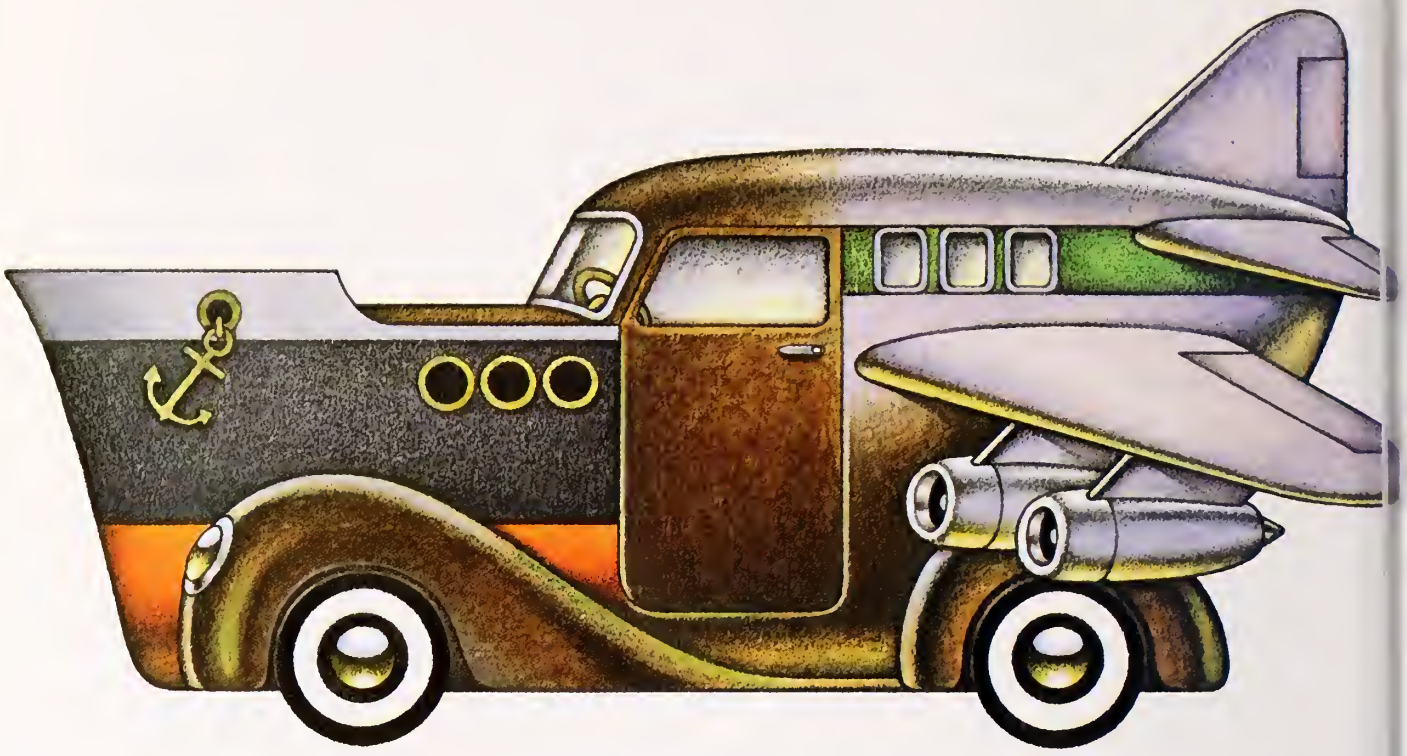

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

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Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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of the

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The Greenbrier

AUGUST 20-23, 1975

PLAN NOW TO ATTEND

The President's Page

MEMBERSHIP IN THE AUXILIARY A MUST!

Mrs. William T. Lawson, President
Woman's Auxiliary to the
West Virginia State Medical Association

Dear Doctor,

I would like to share with you a few thoughts about the importance of the Woman's Auxiliary and the work we are doing—or can do in our communities.

The Auxiliary is a strong, purposeful, well-recognized organization. Through the Auxiliary, doctors' wives can have a collective voice affecting public policies related to health; work to solve health problems in their community; create a better image of American medicine; and help foster favorable sentiment. It is a responsibility and a privilege to be an Auxiliary member.

The AMA Auxiliary was started in 1922 by a few doctors' wives who were concerned about health standards of common interest in their communities. This non-profit organization continues to focus its activities primarily on physical and mental health, and those many aspects of the community which influence health.

Our scope is broader now and includes areas of public relations, legislation and, of course, AMA-ERF.

The Auxiliary is working to help prevent some of the health-related problems and to assist in educating the public about other health concerns. We are interested in the promotion of better health in the schools through a total education curriculum, working in the areas of child abuse, VD education in schools and communities, and providing loans to worthy students interested in Health Careers.

Membership is a keystone of an organization. To set the keystone firmly in place; to become a stronger Auxiliary and to attain our goals—our membership must be increased. Is your wife a member?

Sincerely,

THE WEST VIRGINIA MEDICAL JOURNAL

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EDITORIALS

THE BRIGHT SIDE

There is a bright side to things, you know. Things are just never all bad. Take Congress for instance. Sure, they're going to pass a National Health Insurance law. Some of them can hardly wait. They sit like Madam LaFarge grinning over her knitting. And a good many of them believe they have us in the same helpless position she enjoyed watching.

The imagery is bad. Live capons are what they are looking for, not a clothes hamper full of silent trophies. Which brings up the first bright spot. They need us alive and practicing. We need not make acquaintance with our local welfare worker. We will still have jobs when the legislating ceases.

The jobs won't be quite as much fun as they have been though. No matter the specific plan adopted, it won't take long for the paymasters to start issuing work rules and other edicts. Medicine under such circumstances won't be quite as interesting as a profession. To affect the posture of professionalism when we are controlled, regulated, packaged and dispensed will be too difficult and undignified an illusion to maintain. The bright side of this is that it will be nice to have regular hours just like any other working man.

Have you thought about how nice it will be to have the time to work on a few do-it-yourself projects around the house like the other guys we've heard about all these years? How about the long weekends and all those Monday holidays off? We'll probably have time to help the kids with homework in the evening. Maybe we'll go fishing or hunting for a few hours after work, or stop in for a few beers with the boys from over at the factory. A whole hour for lunch? Luxury! A hospital staff bowling league might be nice.

Of course, it might not be easy to start swing shifts. But the guys down at the mill seem to be able to live with it. If they can do it, we can. There might be some sort of a problem with all those patients sitting around in the waiting room when quitting time comes. Some of them will probably be surly or might even get nasty when they're told to come back when the office opens Monday morning.

Another cheerful side benefit is that we won't have all those AMA, State Medical, County Society and Specialty organization dues to pay. Doing away with the fiction of professionalism will obviate the need for paying for whatever alleged benefits these organizations give.

The saving here, however, might just have to go into union dues. There's no doubt we will need a strong union to represent us with management, and unions cost a lot of money. But as paid up union members we'll probably be able to get any number of extra days off every year when some of our brother unions decide to picket the hospital. And were picket lines not honored, our only security would be jeopardized.

There probably will be some expensive real estate on the market in Chicago when those other

things the AMA has been doing are taken over by HEW. The insurance and retirement programs won't be necessary. What the government does not provide our union will negotiate for us as fringe benefits. Things such as physician placement services, the various and sundry publications, legal and practice management services, loan programs, the library and scientific activities as well as the scientific meetings and other educational programs will probably be missed, but only by those who use them. It's likely though that with the homogenization of the practice of medicine, the individual doctor's push toward excellence will be less urgent.

For those heart sick at the imminence of a humiliating submission, the most heartening eventuality to contemplate is the likely paradoxical effect of the castration attempt intended for us. For decades dictatorial power over physicians and their medical policies has been attributed to the AMA. Anyone who has ever attended a County Medical Society meeting, let alone a meeting of the AMA House of Delegates, knows how ludicrous this attribution is. Doctors represent the epitome of individualism and their individual brands of free enterprise practice in actuality have barely tolerated the intrusions of the AMA. Concerted action by organized medicine has been virtually non-existent because of the impossibility of attaining anything resembling a consensus. The break-up of our cottage industry and the subsequent organization of Medicine's disorganized remnants will bestow a power on physicians no one in the AMA ever knew, dreamed of, or even wanted. Concerted action will be not merely possible, but inevitable. Standing next to the gears with monkey wrench in hand and sabotage in our hearts, temptation might be overpowering.

Things are not really all that bright but it is some small consolation to look into our crystal ball and know that in the brawl coming up, although maimed, disfigured, scarred and crippled, we will survive. But we may be a little irritable.

SURPRISE PARTY FOR DR. MAXWELL

A surprise party honoring Dr. G. R. Maxwell of Morgantown was held recently at the VFW Hall in Morgantown and was attended by 386 friends and relatives.

At the meeting, many friends voiced their praise of Doctor Maxwell. His relative, Judge Robert E. Maxwell of Elkins, gave the speech of the evening—relating the development of medicine in Doctor Maxwell's life term. Benjamin E. Reeder of Morgantown was the excellent master of ceremonies.

Doctor Maxwell has practiced medicine in Morgantown for 50 years and for 43 years was Clinical Associate Professor of Medicine at the West Virginia School of Medicine—serving under five Deans of Medicine.

Doctor Maxwell was one of the first internists in West Virginia to be certified by the American Board of Internal Medicine. Although he is a specialist and academician, he is really a physician of and for the people. Like his illustrious father, a Past President of the West Virginia State Medical Association, he served all people great and small, day and night until illness and time forced him to limit his professional activities.

In the community and state, he busied himself with many extra curricular activities. He was President of the West Virginia TB and Health Association for four years and was clinician for many chest clinics all over Northern West Virginia. He is recipient of the Cooke award for long and meritorious devotion to the diagnosis and prevention of Pulmonary Diseases. He was Medical Director of Eastmont Sanitorium for 20 years.

He is devoted to the great outdoors and has fished from Maine to Minnesota. Squirrel season is his favorite holiday.

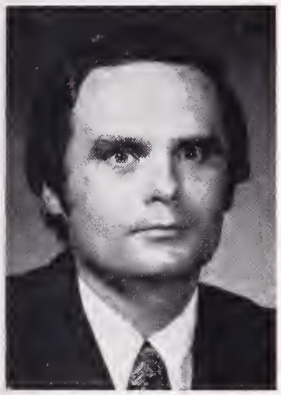
Doctor Maxwell was graduated from West Virginia University and received his M.D. degree from the University of Cincinnati Medical School. He served an internship at Grand Hospital in Columbus, Ohio, and returned to Morgantown to practice with his father, the late Dr. Cyrus H. Maxwell. He married Florence Sutphen of Columbus and there are two children, Dr. George H. Maxwell and Mrs. Mary Kennedy; a brother, Dr. Cyrus H. Maxwell, III, and all of his family attended the great surprise party in Morgantown.

This writer has known Doctor Maxwell for most of his medical career and can certify to his long and honorable service to all aspects of medicine. He is a Past President of the Monongalia Medical Society, a Fellow of the American College of Physicians, a Fellow and Past Governor of the American College of Chest Physicians. It is hoped that his dedicated efforts may continue to support the cause of medicine for many years to come.

GENERAL NEWS

Two Additional Speakers Selected For 108th Annual Meeting

Dr. Philip M. Sprinkle of Morgantown, Chairman of the Program Committee, has announced that Drs. Vincent T. DeVita, Jr. and Paul B. Chretian, both of Bethesda, Maryland, have accepted invitations to present papers during the 108th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 20-23, 1975.



Raymond B. Weiss, M. D.

Doctors DeVita and Chretian will speak at the first general scientific session on Thursday morning, August 21, which will be devoted to a "Symposium on New Concepts in Cancer Diagnosis and Therapy."

Doctor DeVita is Director of the Division of Cancer Treatment of the National Cancer Institute in Bethesda. Doctor Chretian is in the Department of Surgery of the National Cancer Institute.

It was announced previously that Dr. Ariel C. Hollinshead, Ph. D., Professor of Medicine at the Laboratory for Virus and Cancer Research at the George Washington University Department of Medicine, also will speak at this session.

Dr. Raymond B. Weiss of Morgantown will be the Moderator for this session.

Raymond B. Weiss, M. D.

Dr. Raymond B. Weiss is Assistant Professor of Medicine at the West Virginia University School of Medicine. A native of Washington, D. C., Doctor Weiss graduated from the University of Minnesota and received his M. D. degree in 1965 from that institution's medical school.

He served a mixed medicine-surgery internship and two years of internal medicine residency at WVU. This was followed by a two-year fellowship in medical oncology at the University of Minnesota Hospitals as a U. S. Public Health Service trainee.

Doctor Weiss is a Diplomate of the American Board of Internal Medicine and is a member of the American College of Physicians and the American Society of Clinical Oncology. He is a senior investigator of the Acute Leukemia Group B, an experimental cancer chemotherapy cooperative group of 27 medical centers. His particular interests are lymphomas and breast cancer and clinical use of experimental chemotherapy. He is the author or co-author of more than 12 scientific papers in the field of medical oncology.

Three General Scientific Sessions

Doctor Sprinkle said there will be three scientific sessions on Thursday, Friday and Saturday mornings and that every effort possible will be made to keep Thursday and Friday afternoons open to enable everybody to enjoy the recreational facilities available at The Greenbrier. Members of the various sections and affiliated societies have been asked to hold breakfast meetings if they plan to meet during the Annual Meeting.

Business Meetings

The Pre-Convention Meeting of the Council will be held on Wednesday morning, August 20, and the first session of the House of Delegates has been scheduled that afternoon. The final session of the House of Delegates will be held on Saturday afternoon, August 23.

Dr. William E. Gilmore of Parkersburg, the President, will deliver his Presidential Address at the final session of the House of Delegates.

Serving with Doctor Sprinkle on the Program Committee are Drs. R. J. Bailey of Parkersburg, Fernando G. Giustini of Wheeling, Robert D. Hess of Bridgeport, Jack Leckie of Huntington and Joseph T. Skaggs of Charleston.

Seminar On Psychiatric Problems Of Coal Miners, April 25

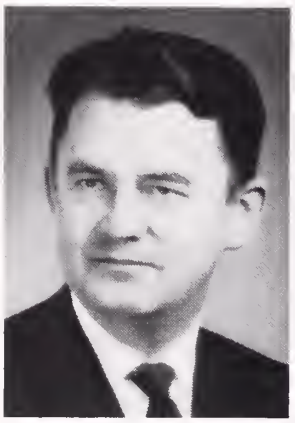
A Seminar on "The Psychiatric Problems of Coal Miners" will be held on Friday, April 25, beginning at 1:00 P. M., at the Saint Albans Psychiatric Hospital in Radford, Virginia.

For additional information contact: Mr. George K. White, Administrator, Saint Albans Psychiatric Hospital, Radford, Virginia 24141.

WVU Appoints Dr. Alvin L. Watne Chairman, Dept. of Surgery

Dr. Alvin L. Watne has been appointed Chairman of the Department of Surgery at the West Virginia University School of Medicine.

An outstanding scientist in the field of cancer research, treatment and teaching, Doctor Watne has been a member of the faculty since 1962. He was promoted to Professor of Surgery in 1967 and has been Acting Chairman of that department since September 1973.



Alvin L. Watne, M. D.

Prior to coming to WVU, where he was named Charleston Foundation Professor of Cancer Research—a title he still holds, Doctor Watne was Associate Chief Cancer Research Surgeon at Roswell Park Memorial Institute in Buffalo, New York.

A native of Shabbona, Illinois, Doctor Watne holds B. S., M. S. and M. D. degrees from the University of Illinois College of Medicine in Chicago.

He served in the U. S. Army from 1944 to 1946 and interned at Indianapolis General Hospital. He was a research assistant, then resident in surgery and an American Cancer Society Fellow at the University of Illinois Research and Education Hospitals in Chicago before going to Roswell Park.

Doctor Watne has won awards for research and teaching. At WVU he is Cancer Coordinator and serves as program director for two training grants from the National Cancer Institute. He also is Consultant in Surgery to the Veterans Administration Hospital in Clarksburg.

The new Chairman has served as President of the West Virginia Division and Monongalia County Unit, American Cancer Society; and the West Virginia Chapter, American College of Surgeons. He is Chairman of the Cancer Committee for the West Virginia State Medical Association. His other memberships include the Halsted Society, Alpha Omega Alpha, Society of University Surgeons, both the Pittsburgh and Roswell Park Surgical Societies, and the American Association for Cancer Research. He is author or co-author of 96 publications for scientific journals and has written chapters for four medical textbooks.

Having been particularly involved in research concerning cancer of the large intestine, Doctor Watne spent a sabbatical leave in England during 1971 and worked with other scientists who have a major interest in this field in attempting to learn additional investigative techniques.

Doctor Watne is married to the former Diane Folio and they are parents of a daughter and two sons.

Dr. James P. McMullen, Former Association President, Dies

Dr. James Park McMullen of Wellsburg, former President of the West Virginia State Medical Association (1955), died on February 18 in a Steubenville (Ohio) hospital following an illness of several weeks. He was 78.

Doctor McMullen, a cardiologist, practiced in Wellsburg for more than 50 years. Before becoming President of the State Medical Association, he served as a member of its Council and as Vice President. He was a member of the Association's Program Committee for five years, serving as its Chairman twice, and was Chairman of the Association's Medical Scholarships Committee in 1965-67.

J. P. McMullen, M. D.

Doctor McMullen was President of the Brooke County Medical Society two times and also served as Vice President and Secretary.

He retired six months prior to his death.

A native of Somerfield, Pennsylvania, Doctor McMullen was graduated from Bethany College and received his M. D. degree in 1919 from the University of Pittsburgh School of Medicine. After interning at Mercy Hospital in Pittsburgh, he was associated with Dr. John A. Lichty of that city from 1920 until 1923, when he located at Wellsburg for the practice of his specialty of internal medicine and cardiology.

Doctor McMullen, who also was a member of the American Medical Association, was a former Brooke County Health Officer. He had been a member of the medical staff of Ohio Valley Hospital in Steubenville since 1925, and installed the first heart station in the Ohio Valley in 1931 at that hospital. A member of the Board of Trustees of Bethany College for 40 years (1929-70), he was awarded an honorary Doctorate of Science Degree in 1971 by the college. He served seven years as President of the Brooke County Board of Education.

Survivors include the widow; one daughter, Dr. Jane Irmscher, a pediatrician in Fort Wayne, Indiana; one son, James P. McMullen, Jr., of Wellsburg, Brooke County Prosecuting Attorney; and eight grandchildren.

State Pediatrics Chapter To Hold Spring Meeting In Elkins

The Spring Meeting of the West Virginia Chapter of the American Academy of Pediatrics will be held April 9 and 10 in Elkins at Memorial General Hospital and Golden Clinic.

The program will begin at 1 P. M. on Wednesday, April 9, with a scientific session on "Orthopedic Problems Commonly Seen in the Pediatrician's Office." The speakers and their subjects will be "Problems Which Can Be Handled by the Pediatrician or Family Practitioner," Herbert A. Weil, M. D., Staff Orthopedist, Memorial General Hospital and Golden Clinic; and "Orthopedic Problems Which Should Be Referred to the Orthopedist," Robert N. Clark, M. D., Professor and Chairman, Department of Orthopedics, West Virginia University Medical Center, Morgantown.

Following will be a clinical pathology conference. The case presentation will be by G. T. Machinski, M. D., Pediatrician, Memorial General Hospital and Golden Clinic, with case analysis and discussion by Paul Gaffney, M. D., Professor of Pediatrics, University of Pittsburgh. Autopsy findings will be presented by J. V. Amorin, M. D., Pathologist, Memorial General Hospital and Golden Clinic, and a brief resumé of the defect present in the case will be discussed by W. Gene Klingberg, M. D., Professor and Chairman, Department of Pediatrics, WVU.

Dinner will be held at Faraway Hills Inn in Beverly. The speaker will be Richard Moriarty, M. D., Children's Hospital, Pittsburgh, whose topic will be "Certain Aspects of Poisoning in Children."

Breakfast and a business meeting will begin at 8 A. M. on Thursday, April 10, to be followed by a scientific presentation on "Identification and Transport of the High-Risk Infant," by William A. Neal, M. D., Assistant Professor, Department of Pediatrics, WVU. Paul Taylor, M. D., Elizabeth Steele Magee Hospital, Pittsburgh, then will discuss "Diseases of the Newborn."

Two Charleston Physicians Unhurt In Forced Landing Of Plane

A light plane carrying two Charleston physicians made a forced landing on March 12 on the golf course in Coonskin Park near Kanawha Airport in Charleston. The two physicians, both of whom escaped injury, were Drs. Robert E. O'Connor, ophthalmologist, and George A. Shawkey, pediatrician and President of the Kanawha Medical Society. The plane, a Cessna 182, was piloted by Doctor Shawkey.

Doctor Shawkey said, "We simply lost power. I tried to apply power—but couldn't. The tower at the airport radioed that there was smoke coming from the tail of the plane. At first we thought we might be able to make a landing at the airport and then realized we couldn't. I looked for a place to land. We came over the trees. And we were pretty close to the trees."

"After the plane hit the ground, I guess it traveled about 1,000 feet before coming to a stop," Doctor Shawkey said. "I guess it would be safe to say the Lord was with us. Everything just worked out right."

The doctors were on a proficiency flight and had been in the air for about 30 minutes. Doctor Shawkey said he has logged about 900 flying hours and flown about 100,000 miles as a pilot. Doctor O'Connor said Doctor Shawkey did "a fantastic job" in landing the plane.

Medical And Chirurgical Faculty, Maryland, Meets April 30 - May 2

The 177th Annual Meeting of the Medical and Chirurgical Faculty of Maryland will be held April 30-May 2 at Hunt Valley Inn in Hunt Valley, Maryland. There is no registration fee. The scientific program is acceptable for 13 prescribed credit hours by the American Academy of Family Physicians, and for Category 1 credit hours for the Physician's Recognition Award of the American Medical Association.

Daily concurrent sessions co-sponsored by the faculty and various specialty societies will be held on a variety of topics, which follow:

"Cancer of the Breast: The Present Status," "Immunosuppressive Therapy in Dermatology," "Bone Scanning in Malignant and Benign Disease," "Family Practice Seminar," "Cardiac Emergencies," "Contrast in Cancer: Ontario Versus Maryland," "Epidemiology of Urinary Tract Infection;"

"Reconstructive Surgery of the Head and Neck," "Normal Aging: What Is It?," "Ultrasound in Medicine: Echoes With Answers," "Psychological Implications of Severe Trauma: Emotional Sequelae to Unconsciousness," "Current Therapy in Diabetes and Management During Surgery;"

"Eye Hazards In Our Environment," "Neck and Arm Pain: Diagnosis and Management," "What's New In Antimicrobial Therapy," "The Nature and Treatment of Systemic Lupus Erythematosus," "Accreditation as a Means of Laboratory Peer Review;"

"Current Problems of Graduate Medical Education," and "Attempts to Rehabilitate the Cancer, Hypertensive and Cardiac Patient Back to Gainful Employment."

For additional information contact John Sargeant, Executive Director, Medical and Chirurgical Faculty of the State of Maryland, 1211 Cathedral Street, Baltimore, Maryland 21201 (Phone (301) 539-0872).

West Virginia Wesleyan Honors Dr. Robert L. Chamberlain

For 26 years, a Buckhannon family physician, Dr. Robert L. Chamberlain, has served West Virginia Wesleyan College, appearing daily at Barnes Memorial Health Center to diagnose and treat, and sometimes just to listen and give words of encouragement to the more than 1,600 students now enrolled.

As a gesture of friendship and thanks for his years of devotion to the college, Miss Jeannie King, daughter of Dr. and Mrs. William E. King of Morgantown, and Paul R. Heaton, son of Mr. and Mrs. N. W. Heaton of Roaring Spring, Pennsylvania, both senior nursing majors at Wesleyan, presented Doctor Chamberlain with a red carnation symbolic of Doctors' Day on Easter Sunday, March 30.

Also on hand at the informal ceremony was College President John D. (Jay) Rockefeller, IV, who represented all the Wesleyan family in expressing thanks for Doctor Chamberlain's 26 years of medical service to the campus community.

Doctors' Day was chosen as the day corresponding to the date in 1842 when Dr. Crawford W. Long, the famous Georgia physician, first used ether as an anaesthetic agent in a surgical operation, thereby providing mankind with freedom from pain and suffering during surgery.

Dr. Robert L. Chamberlain, Buckhannon family physician, was honored for 26 years of service to the students at West Virginia Wesleyan College when nursing students presented him a red carnation symbolic of Doctors' Day on Easter Sunday, March 30. Making the presentation above are Miss Jeannie King, daughter of Dr. and Mrs. William E. King of Morgantown; Paul R. Heaton, son of Mr. and Mrs. N. W. Heaton of Roaring Spring, Pennsylvania, both senior nursing majors at Wesleyan; and College President John D. (Jay) Rockefeller, IV.

'MEDIX' TV Series On Medicine Being Broadcast In State

"MEDIX," a 30-minute weekly television documentary series on medicine, is now being shown over two television stations in West Virginia. The program is sponsored by the Burroughs Wellcome Company in cooperation with the Los Angeles County Medical Society.

"MEDIX" is designed to provide the American public with health care information that will help them live normal and healthy lives. The series of 26 programs premiered on March 16 over WHTN-TV (Channel 13) in Huntington and Charleston and may be seen on that station on Sundays at 1 P. M. The Oak Hill station, WOAY-TV (Channel 4), is broadcasting the series on alternate Sundays at 10:30 P. M., which was effective beginning Sunday, February 16.

Some of the topics covered in the various programs include advice on how to react in emergency or accident situations, new ways of dealing with weight problems, what a patient should know about a physical examination, how to safeguard sight and hearing, and new findings about sleep and dreams.

In 1972 and 1973, "MEDIX" received an "Emmy" from the Hollywood Chapter of the Academy of Television Arts and Sciences for achievement in a Community Affairs Series. The public service program has been endorsed by the State Medical Association and several county medical societies.

Insurance Information Source For State Employees Given

Mr. Robert H. Slack, Executive Secretary of the West Virginia Public Employees Insurance Board, has requested that the following notice by the Board be made:

Effective April 1, 1975, we have retained the Equitable Life Assurance Society of the United States as "Benefits Administrator" for the hospital-surgical, medical plan covering The State of West Virginia employees and their families.

To provide service to State Employees, Equitable has opened a Benefits office in Charleston at 1116 Quarrier Street. For charges incurred on or after April 1 inquiries regarding eligibility or inquiries on specific claims should be directed to Equitable.

In Charleston the telephone number is 344-1751. Those outside the Charleston area may dial (toll-free) 800-642-8582.

Display By WVU Physicians Wins Award At Cardiology Meeting

A scientific display by three physicians from the West Virginia University School of Medicine received a second-place award during the 24th Annual Scientific Session of the American College of Cardiology held recently in Houston.

The WVU researchers who sponsored the award-winning display of an "Audio Visual Review of Pediatric Cardiology" were Drs. George Khoury, Roland Schmidt and William A. Neal.

The top award was won by Robert W. Barnes, M. D., a cardiologist from the University of Iowa Hospitals, Iowa City. His exhibit demonstrated the "Functional Evaluation of Venous Disease."

State Hospital Licensing Program Discussed By Doctor Dyer

The State's hospital licensing program was discussed by Dr. N. H. Dyer, Director of the West Virginia State Department of Health, in a recent issue of the Department's *State of the State's Health.* The text, in part, is as follows:

Before 1947, there was no state-administered licensing program for hospitals in West Virginia, but during that year a Bureau of Hospitals and Medical Facilities was established in the State Health Department and one of its functions was to administer a hospital licensing program as authorized in Chapter 16, Article 5-B, Code of West Virginia, 1931, as amended.

An advisory Board was also created by the 1947 Legislature, which consists of seven members appointed by the Governor and approved by the Senate. By law, four of the members are well versed in hospital organization and administration, and the remaining three are chosen from the fields of medicine, nursing, welfare, public health, architecture, professions allied to health or consumers of hospital services. The term of service is for seven years.

The first Advisory Board, working with medical, nursing and hospital associations, with other State Agencies and other Divisions of the State Health Department, formulated minimum requirements for licensing of hospitals. Regulations for hospital licensing were adopted the next year, in 1948. Since that time several amendments have been added to the regulations and they are currently being considered for revision.

Presently, seventy-five general hospitals and four specialty hospitals, which includes eye and ear, mental and chronic disease hospitals, are under the state licensing program. The regulations exclude hospitals operated by the Federal and State Governments, first-aid stations and emergency care facilities which do not provide accommodations for hospitalization, homes or institutions regularly licensed by the West Virginia Nursing Home Licensing Board and institutions regularly licensed by the Department of Welfare. There are, therefore, five Federal medical facilities, five state mental hospitals, two state emergency hospitals, two chronic disease hospitals, one penitentiary hospital and one university hospital that are not in the licensing program conducted by the Bureau of Hospital and Medical Facilities.

Licenses Issued Annually

Licenses are issued on an annual basis from July to June. The review of a lengthy application form submitted by hospitals and an inspection by field representatives of the Bureau which covers the administration of the hospital, the physical plant, operation services, paramedical services, patient care department, outpatient services, adjunct diagnostic and treatment department and the professional standards are used to help determine whether or not the hospital complies with the licensing laws and regulations. Licensing is also dependent upon certification by the State Fire Marshal that the fire safety requirements are satisfactorily met and approved by the State Health Department's Division of Sanitary Engineering for the food handling services.

Fifty of the State's general hospitals are visited and inspected by the Joint Commission on Accreditation of Hospitals, an organization founded in 1952 consisting of the American College of Physicians, The American College of Surgeons, The American Hospital Association and the American Medical Association. It specializes in conducting a very thorough examination of hospital operations and procedures. One general hospital in the state is accredited by the American Osteopathic Association. Accreditation by these organizations is not compulsory but rather a voluntary decision by the hospital to have its activities compared with standards established by the organizations. It is, however, a prerequisite for approved intern and residency training programs for doctors as well as for many nurse training programs.

Members of the Medical Licensing Board of West Virginia and others recently attended a banquet sponsored by the Federation of State Medical Boards of the United States in Chicago at the Palmer House. From left, are Dr. Frank J. Holroyd of Princeton, Chairman of the Licensing Board, and Mrs. Holroyd; Dr. Joseph A. Smith, Dunbar; Mrs. Greta Pridemore, Supervisor of the Licensing Board staff; Dr. N. H. Dyer, State Health Director and Secretary of the Licensing Board, and Mrs. Dyer; Dr. and Mrs. Harry S. Weeks, Jr., Wheeling; and Dr. Ross E. Newman, Mullens. Not shown is Dr. Richard E. Flood, Weirton, a member of the State Licensing Board and also a member of the Board of Directors of the Federation of State Medical Boards of the United States. The banquet was held in conjunction with the American Medical Association's 71st Annual Congress on Medical Education.

Kennedy's Back Pain Relieved By Acupuncture, Book Says

The former physician of President John F. Kennedy gave her famous patient relief from back pain through one of the techniques of acupuncture.

This observation is outlined in the new book, *More than Herbs and Acupuncture* (W. W. Norton & Co., $7.95), by Dr. E. Grey Dimond, Provost for the Health Services at the University of Missouri-Kansas City, who made three trips to the People's Republic of China (PRC) since 1971 and who arranged the visit to the United States of a delegation of Chinese physicians in 1972.

Doctor Dimond also makes the point that new China now has become a social and economic force on the world scene, with changes in medicine and health only a sample of that nation's numerous other achievements which will exert an influence on international relations through the remainder of this century and into the next.

He says Janet Travell, physician to President Kennedy, gained his confidence of her professional skills by relieving his back pain after several back operations had not helped.

Doctor Dimond explains that what she did was to inject by needle a local anesthetic into "trigger areas," that is, those points of maximum sensitivity or greatest pain.

Trigger Areas Recognized

"The recognition of trigger areas and subsequent muscle spasm," he writes, "and their total relief by needling was a true contribution by Doctor Travell and, one must say, a contribution not well appreciated by her colleagues because they could not explain her theory with their own accepted anatomical rules."

He adds that acupuncture today, as it will be used by the American physician, is in part exactly what Doctor Travell tried to offer to her colleagues more than 25 years ago. He says he has had in his own files for more than two decades articles written by her on the subject of "trigger zones."

"In one of those," Doctor Dimond writes, "she made the bland, uncluttered comment that she had found that the insertion of the needle without the injection of a local anesthetic often resulted in complete relief of pain! I have not seen Janet for several years, but I hope she is enjoying this latter-day, oriental verification of her life's work."

The Kansas City cardiologist—a protege of the late Dr. Paul Dudley White, with whom he entered the PRC as the first American physicians to do so in almost a quarter of a century—says American acupuncture falls into two unequal categories. He condemns the vast majority as seeming to be "a clutter of uncritical, money making quackupuncture."

He writes that in the United States, there is a large number of semi-neurotic, complaining, worrying, underused and over-stressed healthy people.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Apr. 2-4—Occupational Lung Disease PG Course (WVU Co-Sponsor), Morgantown.

Apr. 6-10—Am. Assn. Neurological Surgeons, Miami Beach.

Apr. 7-10—Am. College of Physicians, San Francisco.

Apr. 9-10—Spring Meeting, W. Va. Chapter, Am. Academy of Pediatrics, Elkins.

Apr. 9-12—Am. Gynecological Soc., Phoenix, Arizona.

Apr. 14-16—Am. Assn. for Thoracic Surgery, N. Y. City.

Apr. 17-20—Med. Assn. of Georgia, Atlanta.

Apr. 18-19—Pulmonary Disease Symposium, Arlington, Va.

Apr. 21-24—Recent Advances In Allergy, Hot Springs, Va.

Apr. 23-26—Science Assembly, Pa. Chapter of Am. Coll. of Emergency Physicians and Emergency Depart. Nurses Assn., Philadelphia.

Apr. 25—First Annual Residents Teaching Day, Div. of Otolaryngology, WVU Med. Center, Morgantown.

Apr. 25—Sem. On Psychiatric Problems of Coal Miners, Radford, Va.

Apr. 25-27—W. Va. Chapter, AAFP, Morgantown.

Apr. 27-30—W. Va. Acad. of Ophth. & Otol., White Sulphur Springs.

Apr. 28-May 3—Am. Acad. of Neurology, Bal Harbour, Fla.

Apr. 30-May 2—Med. & Chirurgical Faculty of the State of Maryland, Hunt Valley, Md.

May 1-4—Am. Society of Internal Medicine, Washington, D. C.

May 1-4—North Carolina Med. Society, Pinehurst, N. C.

May 5-8—Am. Coll. of Ob. & Gyn., Boston.

May 11-15—Am. Urological Assn., Miami Beach.

May 11-15—Ohio State Medical Assn., Columbus.

May 18-24—Am. Gastroenterological Assn., San Antonio, Texas.

June 2-4—Am. Neurological Assn., New York City.

June 14-19—AMA Annual Meeting, Atlantic City.

June 23-26—Am. Orthopaedic Assn., Hot Springs, Va.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Oct. 3-4—ASIM, Portland

Oct. 6-9—AAFP, Chicago.

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

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NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

WVU Medical Center –News–

West Virginia's family practice medical residency program will expand in two directions for its second year beginning next July 1.

Dr. William D. Crigger, President of the West Virginia Academy of Family Physicians, said the number of practice centers will double and the total of young doctors entering the medical specialty will increase by four over last year.

The three-year residency programs in the Kanawha Valley, Morgantown, Clarksburg and Wheeling will have two women and 11 men. They will join nine others who are completing their first year of training.

"The once downgraded general practitioner is being superseded by a new breed of doctor who is more sophisticated in diagnosis and is more knowledgeable in preventive medicine, but who has not lost the understanding and sympathy the older practitioner had for his patient," Doctor Crigger said.

A survey team from the National Medical Audiovisual Center in Atlanta joins with guides to watch a School of Nursing telelecture in progress in a special new section at the West Virginia University Medical Center Library. Standing (from left) are Robert S. Craig, AV education specialist; Robert Murphy, Medical Center librarian; Clement Benjamin, AV systems analyst and consultant; and Dr. Frank O'Connell, School of Pharmacy professor. In addition to tours, the visitors met with the faculty and staff members and will evaluate the resources they found and recommend what else is needed to make the libraary a complete audio-visual learning center.

All of the new residents will be guests of the Academy during its 23rd annual Scientific Assembly, April 25-27, in Morgantown.

At the present rate of development, Doctor Crigger predicted the number of doctors entering medical practice in this State will begin to outnumber those leaving the profession in the next five years. An earlier projection indicated a 10-year period would elapse before the ratio could be realized.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

"The state's doctor shortage is going to drop sooner than we think," he commented.

Among the new class of resident doctors are eight Mountaineers who completed their medical work at West Virginia University Medical Center. The training lineup follows:

Kanawha Valley (South Charleston)—Jeanne M. Adams, Maywood, Illinois; Stephen A. DeGray, Burlington, Vermont; Danny R. Wills, Morgantown; and Harry L. Wagoner, Springfield (Hampshire County); Dr. C. Carl Tully, Director.

WVU Medical Center, Morgantown—Timothy L. Newman, Lovelock, Nevada; Thomas J. Clark, Morgantown; David R. Chapman, Keyser; Samuel K. Roberts, Elkins; and Samuel P. McNeill, Point Pleasant; Dr. John W. Traubert, Director.

United Hospital, Clarksburg — Dorothy Lause, Omaha, Nebraska; Allan B. Bierlein, Furnace, Pennsylvania; and John McWhorter, McWhorter (Harrison County); Dr. L. Dale Simmons, Director.

Wheeling Hospital—Ernest J. Bonitatibus of McMechen (Marshall County); Dr. George M. Kellas, Director.

Faculty Activities

Dr. Randall Prince, Pharmacy, has been named to serve on the Editorial Advisory Board of *Drug Intelligence and Clinical Pharmacy*. He will write occasional articles, editorials and book reviews and review selected manuscripts.

Dr. N. H. Choulis, Pharmacy, presented a lecture recently at the University of Saigon School of Pharmacy. The talk on drug abuse was made while he was on a World Health Organization assignment in Vietnam.

Dr. Stephen Carmichael, Anatomy, presented a seminar recently to the Department of Anatomy at Georgetown University. The seminar, "High-Voltage Electron Microscopy and its Application to the Study of the Adrenal Medulla," was based on research done by Doctor Carmichael and Dr. David J. Smith, anesthesiology and pharmacology.

Dr. Charles A. White, Obstetrics and Gynecology, was in Lexington, Kentucky recently to present talks at a conference co-sponsored by the Departments of Obstetrics and Gynecology at the University of Kentucky and the University of Louisville.

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The Month in Washington

• From the Washington Office of the American Medical Association.

THE American Medical Association has submitted to the 94th Congress a new proposal for national health insurance (NHI).

In the parade of would-be NHI legislation before the new Congress, the medical profession's plan is the only major proposal to have been substantially revised from the offerings of previous years.

The measure is designed to provide full health care for all through private health insurance (with the exception of Medicare beneficiaries) including catastrophic illness protection.

The principal features:

—Mandated employer coverage.
—Coverage for the self-employed and unemployed with a subsidy for premium costs for those self-employed with low incomes.
—Supplemental coverage plus subsidized premium for Medicare beneficiaries in order to equalize benefits.

The major difference between the mandated plan and the Medicredit bill endorsed by the AMA in the last Congress is that the bulk of the government financing relies on general revenues rather than on tax credits, although the tax credit principle is retained for the self-employed.

Despite the 186 sponsors that backed the AMA's Medicredit plan last year—the largest body of support for any NHI measure including that of labor—considerable Congressional resistance developed to tax credits as a financing base.

Under the revised AMA proposal, most people would receive health care protection under a mandated employer program fully financed by premiums paid by employers and their employees. Participation would be optional for employees. At least 65 per cent of the premium would be payable by the employer.

The former Medicredit principles would apply to insurance for the jobless and the self-employed. The individual or family would buy "qualified health care insurance," that is, insurance which meets federally established standards of benefits and policy conditions, and for those whose income falls within a defined subsidy level, the federal government would contribute towards the cost of the premium on a scale related to income.

Government contributions to premiums would be in the form of a credit against income tax or a certificate of entitlement issued by the government and acceptable by the insurer for payment of premium. An individual or family subsidy in any year would be based on its income (measured by income tax liability) for the preceding year. Limited income individuals or families having no tax liability would be entitled to a tax credit (or certificate) for the full amount of the insurance premium. For other eligible persons, the entitlement would range from 10 per cent to 99 per cent of the premium.

Non-employed Medicare beneficiaries would be eligible for federal subsidy for premiums for "qualified supplemental coverage" designed to equalize the available benefits for the elderly as for all others. Such supplemental insurance would be the same as the full insurance policy for persons under 65, but would contain a clause for exclusion of all benefits obtainable under Parts A and B of Medicare. The supplemental insurance would not cover deductibles and coinsurance under Medicare but would require no deductible or coinsurance payments for the supplemental benefits.

The plan provides for continuation of an employee's insurance following termination of employment. Such insurance would be fully paid from a special fund created from general revenues to cover periods of unemployment.

The catastrophic coverage provision requires no deductible. Coinsurance would apply at a rate of 20 per cent on the cost of all covered benefits, within a ceiling limit. The poor would pay no coinsurance, and for others, the coinsurance maximum would be 10 per cent of the individual or family income, reduced by an "exclusion base." The amount of such exclusion would vary according to family size, and would be set at $4,200 for a family of four. Thus, a family of four earning $15,000 would have a coinsurance limit of 10 per cent of $10,000 ($15,000 less $4,200, or $1,080). In no case, however, could coinsurance for a year exceed $1,500 for an individual or $2,000 for a family.

The ceiling on coinsurance would trigger catastrophic expense protection. All benefits under the insurance policy would thereafter continue for the remainder of the policy with no further obligation for coinsurance.

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Obituaries

BRUCE H. POLLOCK, M. D.

Dr. Bruce H. Pollock of Naples, Florida, formerly of Huntington, died February 13 in a Houston (Texas) hospital. He was 69. A native of Swann Creek, Ohio, Doctor Pollock was a former Director of the Cabell-Huntington Health Department, 1954-63.

He was a graduate of Marshall University and received his M. D. degree in 1932 from the Medical College of Virginia. He also received a Master of Public Health Degree from Johns Hopkins School of Public Health. Doctor Pollock served his internship at Chesapeake & Ohio Hospital in Huntington. He was a veteran of World War II and the Korean Conflict.

He was an honorary member of the Cabell County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Doctor Pollock also was a physician with the State Health Department for several years, a former physician with the Huntington Veterans Administration Hospital, and former Director of the Mason County-Point Pleasant Health Department.

Survivors include the widow; a son, Dr. George K. Pollock of Colorado Springs, Colorado; and two sisters, Sarah Larson of Orlando, Florida and Mrs. Nale M. Brown of Cheloquin, Oregon.

HERBERT E. SLOAN, SR., M. D.

Dr. Herbert E. Sloan, Sr., retired Clarksburg physician and surgeon, died on February 18. He was 99. Doctor Sloan, who became a member of the West Virginia State Medical Association in 1911, served as President of the Harrison County Medical Society in 1918 and as First Vice President of the State Medical Association in 1932. He retired in 1952.

Doctor Sloan was born at Archer's Fork, Ohio. He graduated from Marietta College in 1985 and received his M. D. degree in 1898 from the Eclectic Medical College in Cincinnati. He did psotgraduate work at New York Postgraduate Hospital, New York Polyclinic, Chicago Postgraduate Hospital and Massachusetts General Hospital. At one time he was a member of the West Virginia Public Health Council and the Clarksburg City Council.

Doctor Sloan was President of the Mason Hospital Company from 1919 until 1933, when that hospital became the Union Protestant Hospital, in which he was a stockholder and superintendent.

Survivors include five daughters, Elizabeth Sloan of Clarksburg, Mrs. John N. Hough, Boulder, Colorado; Mrs. Kenneth W. Greenawalt, Hartsdale, New York; Mrs. John G. McCloskey, Pass Christian, Mississippi; and Mrs. James H. Coleman, Buckhannon; and two sons, Herbert E. Sloan, Jr., M. D., Ann Arbor, Michigan; and Robert D. Sloan, M. D., Jackson, Mississippi.

(Obituaries Continued On Page xvi)

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) Oral Suspension
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

OBITUARIES (Continued From Page xiv)

ABRAHAM TOW, M. D.

Dr. Abraham Tow, Logan pediatrician, died on February 5 in a hospital there. He was 75. He had been a member of the staff of Guyan Valley Hospital for the past 14 years.

A native of New York City, Doctor Tow graduated from the College of the City of New York and Columbia University and received his M. D. degree in 1921 from Tulane University School of Medicine. He interned at Lenox Hill Hospital in New York City and did postgraduate work in Berlin and Vienna. He practiced and taught medicine in New York at the Lennox Hill Hospital, the New York Polyclinic Hospital and New York Polyclinic Medical School.

Doctor Tow came to Logan County in 1959 to join the staff of Man Appalachian Regional Hospital, at that time known as Man Memorial Hospital. He went to Guyan Valley Hospital about two years later. A Fellow of the American Academy of Pediatrics, he also was a member of the Logan County Medical Society, the West Virginia State Medical Association, the American Medical Association, the New York Academy of Medicine, and the New York Academy of Sciences.

The author of a book, *Diseases of Newborn,* he also had written numerous scientific articles.

Doctor Tow served during both World Wars.

Surviving are the widow; and one son, William R. Tow of New York City.

County Societies

MERCER

The Mercer County Medical Society met on February 17 at the University Club in Bluefield. Dr. John Anziulewicz presented an interesting talk on "Hyperplastic Cholecystosis." His presentation was illustrated by slides demonstrating gall bladder function and differentiating polyps in the gall bladder from stones and tumors.

Malpractice problems were discussed and it appeared that the duties of the Board of Censors, the Grievance Committee and the Committee on Advice and Deportment are poorly understood. It was resolved that these problems be reviewed by the Executive Committee and discussed at the next meeting.—John J. Mahood, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on February 12 at Doctor's Memorial Hospital in Welch.

Dr. Zeferino Arroyo presented a case study of a patient with true achalasia who had a five-year history of difficulty in swallowing. He discussed the surgical management of this case, resulting in

(Continued On Page xix)

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Reconstructive Surgery
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John A. B. Holt, M.D.
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Audiometry

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Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvio Fronyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chong, M. D.
J. W. Woodford, M. D.
A. Richard Weover, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.

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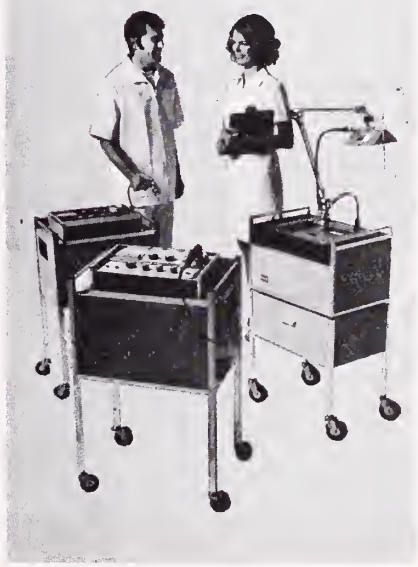

General Medical WEST VIRGINIA

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Annual Audit, 1974

The annual audit of receipts and disbursements of the West Virginia State Medical Association for the calendar year 1974 has been completed by the firm of Ernst & Ernst, Certified Public Accountants of Charleston. The completed audit, with accountants' report, follows:

ERNST & ERNST
Charleston National Plaza
P. O. Box 2906
Charleston, West Virginia 25330

To the Council
West Virginia State Medical Association
Charleston, West Virginia

We have examined the statements of assets, liabilities, and fund balances, arising from cash transactions, of the several funds of the West Virginia State Medical Association as of December 31, 1974, and December 31, 1973, and the related statements of revenues collected and expenses paid of the general fund, and changes in fund balances of the several funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the assets, liabilities, and fund balances, arising from cash transactions, of the several funds of the West Virginia State Medical Association at December 31, 1974, and December 31, 1973, and the revenues collected and expenses paid of the general fund and changes in fund balances of the several funds for the years then ended on a consistent basis.

ERNST & ERNST

Charleston, West Virginia
January 23, 1975

AUDITED FINANCIAL STATEMENTS (CASH BASIS) WEST VIRGINIA STATE MEDICAL ASSOCIATION

December 31, 1974

STATEMENTS OF ASSETS, LIABILITIES AND FUND BALANCES ARISING FROM CASH TRANSACTIONS

ASSETS

	December 31	
	1974	1973
GENERAL FUND		
Cash	$ 4,533	$ 640
Certificates of deposit	78,212	62,500
Other assets	36	36
	$82,781	$63,176
MEDICAL SCHOLARSHIP FUND		
Cash	$31,851	$30,200
Certificates of deposit	7,805	7,000
Due from general fund	10,142	7,875
	$49,798	$45,075

LIABILITIES AND FUND BALANCES

GENERAL FUND		
Notes payable to bank	$15,000	$15,000
Due to medical scholarship fund	10,142	7,875
Fund balance	57,639	40,301
	$82,781	$63,176
MEDICAL SCHOLARSHIP FUND		
Fund balance	$49,798	$45,075

See notes to financial statements.

STATEMENT OF REVENUES COLLECTED AND EXPENSES PAID — GENERAL FUND

	Year ended December 31	
	1974	1973
Revenues collected:		
Dues	$265,831	$257,599
Advertising	18,835	21,620
Consulting fees	6,000	6,000
Interest collected	18,105	—
Contributions	6,736	1,598
Refunds of expense	5,880	1,737
Exhibit space	—	4,625
Other revenues	8,152	5,128
	329,539	298,307
Expenses paid:		
Dues remitted to AMA	135,885	132,015
Salaries and wages	60,390	63,674
Employee benefits	8,121	4,109
Taxes—payroll and other	3,388	2,991
Office rent	7,787	6,942
Office supplies and expenses	9,767	9,366
Telephone	3,834	4,420
Postage	4,188	3,265
Travel	22,888	17,276
Convention speakers and supplies	18,681	16,612
Publishing and printing	32,291	29,733
Other expenses	4,981	10,468
	312,201	300,871
EXCESS (DEFICIENCY) OF REVENUES COLLECTED OVER (UNDER) EXPENSES PAID	$ 17,338	$(2,564)

See notes to financial statements.

STATEMENTS OF CHANGES IN FUND BALANCES ARISING FROM CASH TRANSACTIONS

Year ended December 31, 1974, and December 31, 1973

	General Fund	Medical Scholarship Fund
Balance, December 31, 1972	$42,865	$43,238
Excess of expenses paid over revenues collected	(2,564)	—
Dues	—	8,016
Repayment of scholarship	—	800
Interest collected	—	1,486
Other	—	35
Payment of scholarship installments	—	(8,500)
Balance, December 31, 1973	40,301	45,075
Excess of revenues collected over expenses paid	17,338	—
Dues	—	8,247
Repayment of scholarship	—	3,000
Interest collected	—	2,456
Other	—	20
Payment of scholarship installments	—	(9,000)
Balance, December 31, 1974	$57,639	$49,798

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS (CASH BASIS)

WEST VIRGINIA STATE MEDICAL ASSOCIATION

Year ended December 31, 1974, and December 31, 1973

NOTE A — PRESENTATION OF FINANCIAL STATEMENTS

The financial statements are presented using the cash basis of accounting. Office equipment and other capital expenditures are charged to expense at the time of purchase. Interest earned on certificates of deposit which were purchased in 1969 and 1972, was collected and recorded in 1974, as these certificates matured in 1974. Certificates of deposit purchased in 1974 earn interest quarterly, which is being collected and recorded as earned.

NOTE B — LITIGATION

On January 9, 1975, a class action suit was instituted by a group of practitioners of Chiropractic Medicine against Blue Shield of Southern West Virginia and numerous other defendants which include the West Virginia State Medical Association. The suit alleges a violation of certain sections of the Sherman Act and the Association plans to cause a motion to be filed asking said suit to be dismissed on the grounds that no cause of action against the Medical Association is stated in the complaint of the Plaintiffs.

NOTE C — PENSION PLAN

The Employee Retirement Income Security Act of 1974 (commonly referred to as the Pension Reform Act) became law on September 2, 1974. In general, the Act will require amendments to participation and vesting provisions of pension plans which may increase plan costs and liabilities. These requirements are effective for plan years beginning after December 31, 1975. Because of the limited time from passage of the Act to the end of the current year, the impact on future costs has not been determined.

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

COUNTY SOCIETIES (Continued from Page xvi)

the patient being able to eat and retain food. Doctor Arroyo also presented the case of a patient with a large mass in the left upper quadrant. Doctor Richard O. Gale showed radioactive scan studies of the liver and spleen in this case.

A film was shown on the problems of obesity. The problems of obesity occurring in the last trimester of pregnancy of the fetus, in the first two years of life and at adolescence were discussed.—Arthur A. Carr, M. D., Secretary.

Pulmonary Disease Symposium In Arlington, April 18-19

A Pulmonary Disease Symposium will be held April 18-19 in Arlington, Virginia at the Quality Inn. The two-part symposium on infectious and immunologic pulmonary diseases will be held on Friday, April 18, from 1 to 4:30 P. M.; and on Saturday, April 19, from 9 A. M. to 12:30 P. M.

Sponsors are the American College of Chest Physicians (Potomac Chapter), the District of Columbia Thoracic Society, and the Potomac Lung Association.

The program is acceptable for six hours of credit under the Physician's Recognition Award of the American Medical Association.

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E. C. Voss, M. D.

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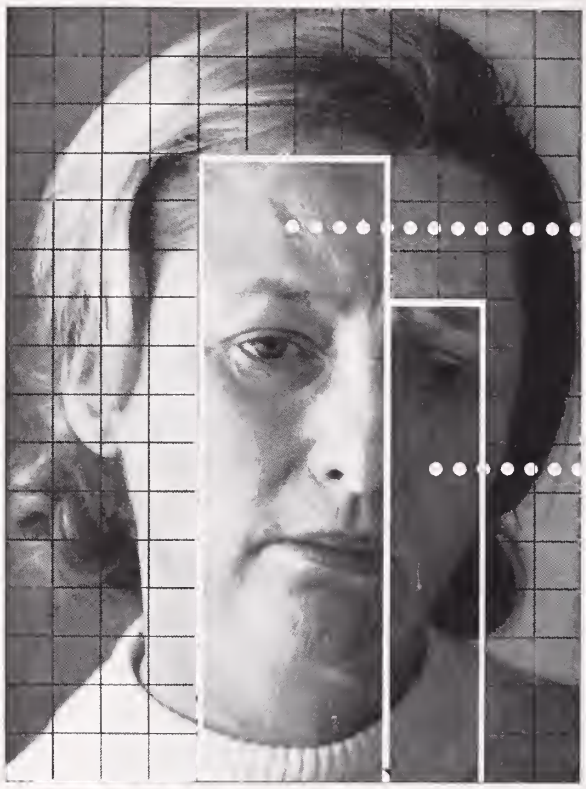

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in e and/or severity of grand mal se u require increased dosage of stai a convulsant medication; abrupt w h may be associated with tempora crease in frequency and/or seve t seizures. Advise against simulta e gestion of alcohol and other CNS le sants. Withdrawal symptoms (si n those with barbiturates and alco occurred following abrupt disco i (convulsions, tremor, abdomina n cle cramps, vomiting and sweat g addiction-prone indlviduals und

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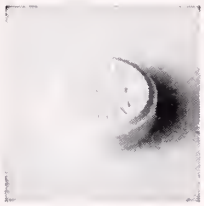
For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.



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Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

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Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

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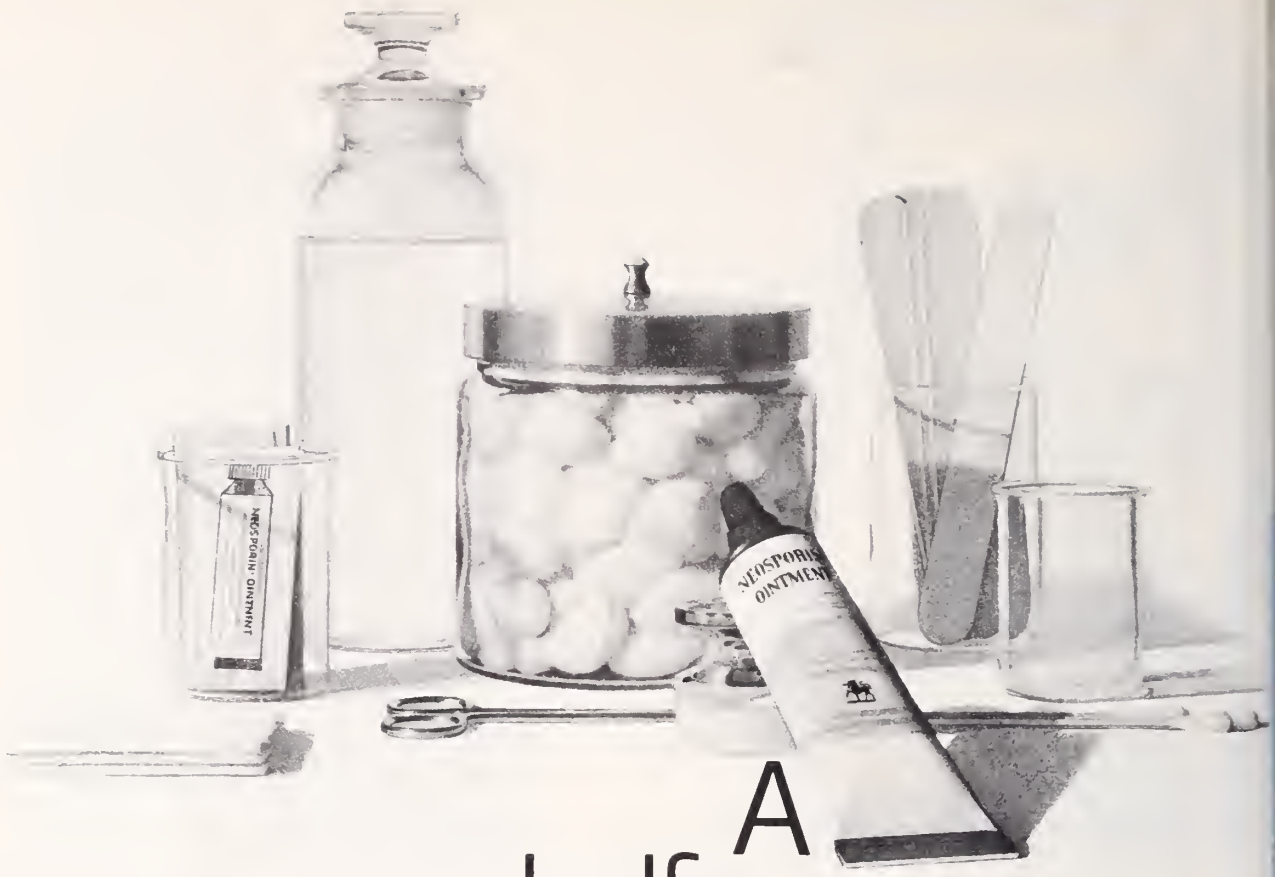

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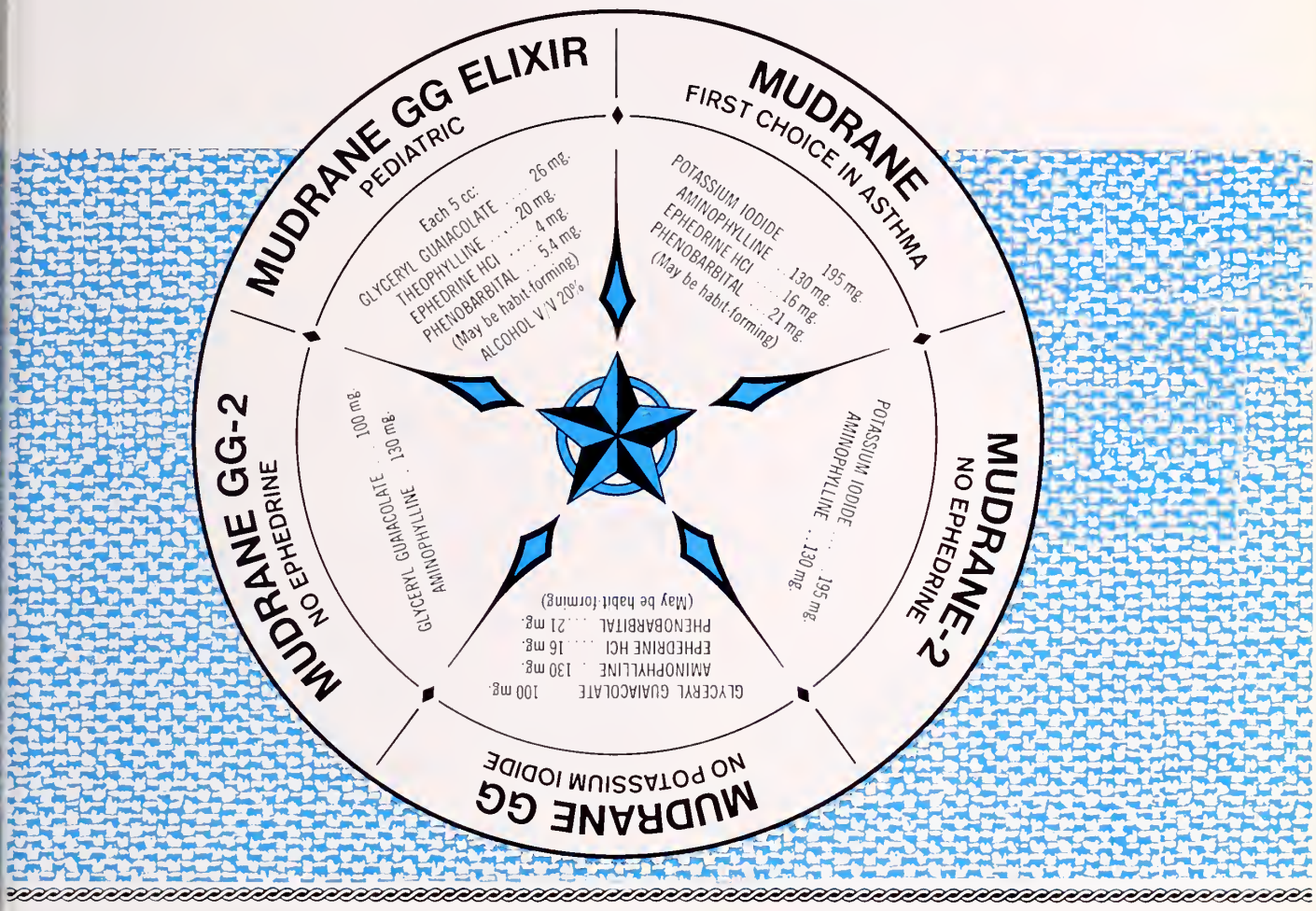

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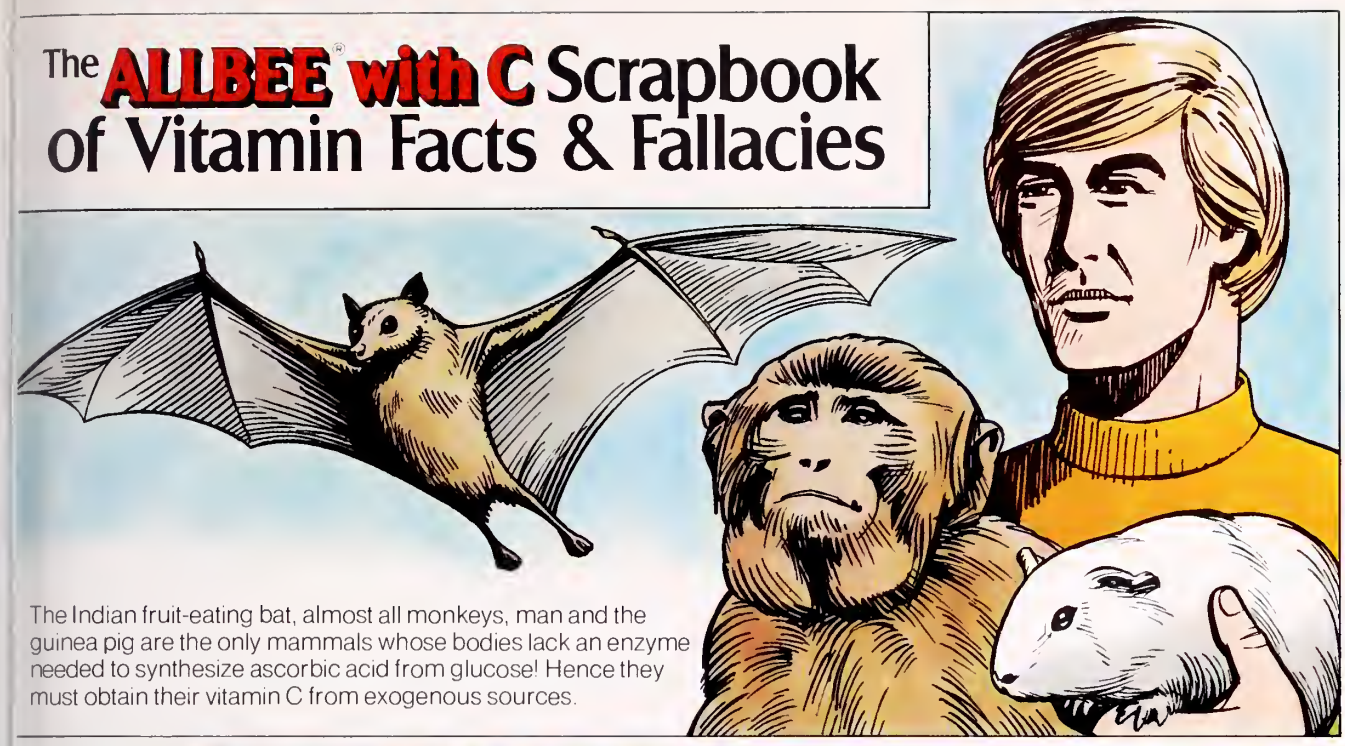

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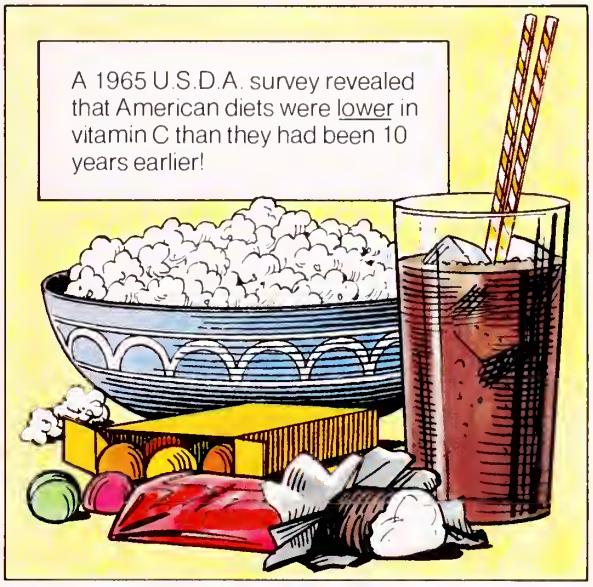

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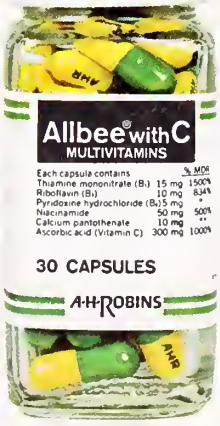

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The West Virginia Medical Journal

Vol. 71, No. 5 May, 1975

A Scoliosis Clinic Progress Report

Robert W. Lowe, M.D.

The purpose of this report is three-fold: (1) To familiarize the reader with some basic principles of scoliosis; (2) To report on the progress of a new scoliosis clinic; and (3) To plead for routine school screening for scoliosis.

Scoliosis or lateral curvature with rotation of the spine was described by Hippocrates who wrote of aggressive attempts at its correction. Andry, who coined the word "Orthopaedia" in 1741, wrote extensively of scoliosis. The spine, when viewed from the side, is a series of gentle balancing curves. When viewed from the front the spine is straight. Any curvature of the spine on the AP roentgen films is abnormal and an exaggeration of the curves of the spine viewed from the side may be abnormal.

Scoliosis can occur from many causes and in any stage of growth, but the majority of cases occur in the pre-teen and early teen-age group. It occurs in both boys and girls with equal frequency, but clinically significant scoliosis affects girls at a rate of five to eight times more frequently than boys. Scoliosis of more than 10° occurs in 1.9 per cent of the population in large chest film surveys.[1]

While many advances have been made in treatment of scoliosis, the curvature is frequently advanced before the patient seeks advice and the diagnosis is made. If diagnosed early, bracing may be the required form of treatment; however, if the curvature is advanced, surgery may be indicated to improve the condition. It is hoped that this report may stimulate earlier diagnosis and treatment of scoliosis.

Early detection of scoliosis and the lack of it is demonstrated in the accompanying pictures. The 12-year-old girl in Figure 1 had a 60° T5-T12 curve at the time the rib deformity was noted by her mother. She has subsequently had a spinal fusion and the curve decreased to 35°. In contrast, the 12-year, nine month-old girl in Figure 2 had been observed carefully by her mother, who also had scoliosis. The child had some asymmetry of the waistline, and the vertebra prominens was one-half inch to the side of the gluteal cleft. There was slight asymmetry of the scapulae. When she bent forward a three-fourth inch, right hump was visible. By roentgenogram her curve measured 23° T7-L1. She was treated with a Milwaukee brace and curve decreased to 19° in the brace. The curve currently is 21° and after a year in the brace, 23 hours per day, she is holding at 21° and weaning herself down to wearing the brace at night time only. Like most girls who have worn a brace and are adept at their exercises, her posture is exemplary.

The Author

- **Robert W. Lowe, M. D., 1611 Thirteenth Avenue, Huntington, West Virginia.**

For early detection of scoliosis it is vital to do the following: (1) examine the child standing and undressed; (2) look at the child from both the front and the back; and (3) determine if the shoulders are level. Most predominantly right- or left-handed adults have a slightly lowered

Figure 1. This female patient is viewed from behind while flexed forward. The 60° scoliotic curve with its associated rib rotation produces the right rib hump.

Figure 2. This female patient, standing erect, is viewed from behind. The lower rib margins and top of the pelvis were marked with ink to demonstrate the waistline asymmetry and the shift of the plumb line of the neck to the side of the gluteal cleft.

shoulder on the side of the preferred extremity; however, this does not apply to children.[2]

Clinical diagnosis of scoliosis is usually made by physical and/or roentgen examination. It must be remembered that the ribs articulate with the thoracic vertebrae. In scoliosis, there is rotation of the vertebrae, and this can be affirmed by rotation of the ribs. This is reflected clinically by a rib hump or asymmetry of lumbar spine as the patient bends forward (Figure 1). Asymmetry of the back or waistline may also be an early clue to scoliosis (Figure 2). This simple clinical test should be a part of the annual examination of all children, but especially of preteen age girls.

Progress of the Clinic

In January, 1973, the Crippled Children's Services of the State of West Virginia funded a scoliosis clinic for Southern West Virginia. This clinic has met monthly at St. Mary's Hospital in Huntington. Since I felt it helpful for the child with scoliosis to see other children afflicted similarly, we initially increased our patient number in the clinic by seeing both private and crippled children's cases at the same time. This also allowed some private patients to obtain financial counseling from the Crippled Children's Service social worker to determine their eligibility for assistance. Unfortunately, we have outgrown the need to increase our number and have established a second clinic for private patients.

The clinic from its inception fostered the belief that cooperation and exchange between the surgeon and the medical personnel is essential when we are presented with a problem as complicated as scoliosis. All clinics have been attended by an orthotist who can construct or adjust the Milwaukee brace when needed. All clinics have been attended by a physical therapist who instructs the patient in the exercises to be performed in the Milwaukee brace. In addition, both the public health nurses and our office nurses have functioned as able counselors. All scoliotic patients who have been admitted to the hospital have been evaluated by Dr. Harry Tweel, an internist and pulmonary physiologist.

In its first 18 months, the scoliosis clinic in Huntington saw 68 individual patients, 35 Crippled Children Service patients and 33 private patients. Of these 68 patients, 52 had idiopathic scoliosis. Of the remaining 16, five had congenital vertebral malformations, four were seen for round-back deformities, two had myelomeningoceles and three were paraplegics of traumatic etiology: one cerebral palsy, one polio and one arthrogryposis. Of the patients with idiopathic scoliosis, four have an associated spondylolisthesis and an additional two have a unilateral spondylolysis. We have one family of five siblings, all of whom presented a right thoracic T5-T12 scoliotic curve, and five patients who were brought in by mothers who themselves had scoliosis: most of these are early curves in private patients.

We have treated 27 patients with Milwaukee braces. It must be emphasized that the current model of the Milwaukee brace, which is fitted with a throat mold, is not complicated by orthodontic complications and can be very attractively worn. I have performed spinal fusions for 12 patients, using Harrington instrumentation in ten. One of these was treated with preliminary halo-femoral traction and in another, a halo-hoop device was used.

Need for Early Detection

A growing spine with idiopathic scoliosis will usually increase in severity without treatment at a rate of approximately one degree per month. Milwaukee brace treatment is most often indicated for curves measuring 20° to 40°. The Milwaukee brace treatment generally stops or markedly slows the progression of such curves, and some improve while in the brace. Curves greater than 60° should be evaluated for surgery.

Treatment of scoliosis is expensive, especially if the curve is marked and surgery is required. The Division of Crippled Children's Services reviewed its expenditures for the fiscal year June, 1973 through June, 1974.[3] It listed 68 cases with the diagnosis of scoliosis only. This excluded myelomeningocele, et cetera. It included those patients treated throughout the state, but mainly those in the Morgantown and Huntington Scoliosis Clinics. The total expenditures by the division was $33,903.76 for these 68 scoliosis patients. The highest single expenditure was $10,236.50 and the lowest expenditure, $10. The average medical expenditure was $498.38 per year. To this figure should be added $116 as an average administrative cost, or an average case cost of $614.38 per year, per patient. It should be kept in mind that this expenditure is the division's cost and excludes any payments by the family's private medical insurance. It also should be remembered that these costs reflect a negotiated per diem hospital rate which is frequently much lower than available to the private individual. Scoliosis is the third most expensive diagnosis to the division, ranking behind that of cystic fibrosis and spina bifidia.

A Plea for Early Screening

All pre-teen-age and early teen-age children should be screened at least annually by observing their undressed backs in the flexed position with hands together in front (Figure 1). This can be done by school nurses and physical education instructors. All children with suspicion of asymmetry should have a standing AP x-ray of the thoracolumbar spine. If a curvature of the spine is noted, an immediate referral to an orthopedist should follow.

For the past ten years in the state of Delaware, an effort at school screening has been in effect. In that state, it is now unusual for a child with a curve of 60° to arrive in the clinics and require surgery; however, it is more common to see patients in the 20° to 25° range.[4] Eight years ago, before effective school screening, the reverse was true as it has been in our clinics. Minnesota and Wisconsin also have extensive and effective school screening programs.[5]

It is hoped that the physicians of West Virginia will encourage all public health nurses and physical education instructors to screen the children in their individual county or district. Perhaps ten years hence West Virginia can be a state where no child with idiopathic scoliosis will be discovered with a curve so severe that surgical correction will be required. For early detection of scoliosis, the following should be performed during the physical examination:

(1) Examine the child standing, undressed.

(2) Watch for deepening of one flank.

(3) Have the child bend forward and see if a unilateral hump is present.

(4) Take a standing AP x-ray of the spine when in doubt.

A list of references may be obtained by writing The Journal.

When people are free to do as they please, they usually imitate each other.

Eric Hoffer

Felty's Syndrome: A Rare Indication For Splenectomy

Herbert Wilsker, M.D.; Ashwin I. Mehta, M.D.; And Raymond C. Bonnabeau, Jr., M.D.

FELTY in 1924 described the syndrome, which now bears his name, of splenomegaly and leukopenia in five patients with accompanying rheumatoid arthritis.[1] This paper reports a case of Felty's syndrome successfully treated by elective splenectomy.

Case Report

A 52-year-old white male was admitted to the Veterans Administration Hospital, Clarksburg, West Virginia, with a six-month history of malaise, cough and low-grade temperature, together with severe, long standing anemia and rheumatoid arthritis. The latter was well controlled by aspirin therapy. His anemia, however, had failed to respond to previous iron therapy.

Physical examination revealed a chronically ill, 52-year-old male with rheumatoid arthritis that involved most of his joints. Expiratory wheezes were heard over both lung fields bilaterally, together with a Grade IV/VI systolic cardiac murmur. His liver and spleen were palpable six centimeters below the right and left costal margins respectively. Both knee joints were hypertrophied and his lower legs were covered with hyperpigmented lesions as well as minute ulcerations. There was also a reducible left inguinal hernia.

Laboratory data revealed a hemoglobin of 10.7 grams, a white blood cell count of 1,300 cells/cm. (with four band forms and a relative lymphocytosis) and a platelet count of 138,000. His iron stores and iron binding capacity were normal. A reticulocyte count was 4.5 per cent and a bone marrow examination was consistent with erythroid hyperplasia and iron deficiency anemia. His rheumatoid factor was positive. Liver function tests, urinalysis and serum protein electrophoresis were all within normal limits. A liver biopsy, however, revealed cirrhosis.

On August 28, 1974, elective removal of a 640 gram spleen was carried out. Two hours postoperatively the white blood cell count had already risen to 4,500 cells/cm. Subsequent examinations showed a steady increase in the number of white blood cells as well as an increased number of platelets (Table 1).

The patient had an uneventful postoperative course which was accompanied by an increased feeling of well being.

The Authors

- **Herbert Wilsker, M. D.; Ashwin I. Mehta, M. D.; and Raymond C. Bonnabeau, Jr., M. D., all from the Departments of Surgery, West Virginia University School of Medicine, Morgantown; and the Veterans Administration Hospital, Clarksburg, West Virginia.**

Comment

Felty's syndrome is found in approximately one per cent of patients who have rheumatoid arthritis and may be accompanied by malaise, weight loss, frequent infections, leg ulcers, anemia, thrombocytopenia, hyperpigmentation of the skin, and lymphadenopathy. In the majority of cases, however, it is the chronic infection and malaise that first bring the patient to a physician.

The leukopenia that is present is due to a decreased number of circulatory neutrophils. Most authors attribute this to the presence of a hypersplenic state with trapping of these corpuscular elements within the splenic pulp.

The intractable anemia in these cases is usually related to the presence of infection or to chronic gastrointestinal blood loss (which may not be massive) which is secondary to the large amount of salicylate ingestion which is required to control the arthritis. The patient presented in this paper had taken six grams of salicylate daily since 1942.

As in this patient's case, removal of the spleen is usually followed by weight gain and clearing

TABLE 1

Felty's Syndrome
Pre- and Post-Splenectomy Hematological Profile

Date	*HGB (GM per cent)*	*WBC (Cells/CM)*	*Platelets (Cells/CC)*
Admission (8/22/74)	10.7	1,300	183,000
THREE UNITS PACKED CELLS TRANSFUSED			
8/26/74	12.0	1,200	.
2 Hrs. Postop (8/28/74)	10.0	4,500	
THREE UNITS PACKED CELLS TRANSFUSED			
8/30/74	12.2	7,100	309,000

of the previously intractable chronic infections, together with an increased subjective feeling of well being and a reversion of the hematological abnormalities to normal.

Elective splenectomy has at times failed to be effective. In these cases, the presence of unresected accessory spleens has been implicated.[2]

Splenectomy is recommended in cases where a leukopenia (less than 2,500 cells/cm.) can be documented and the physical and laboratory examinations (which should include a bone marrow examination) have excluded other causes for the reduced white blood cell count.

Summary

A case of Felty's syndrome (splenomegaly, leukopenia, and rheumatoid arthritis) successfully treated by means of elective splenectomy is reported.

A list of references may be obtained by writing The Journal.

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Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Spontaneous Gastric Rupture During Pregnancy

(Case Report)

Richard F. Fiester, M. D.; and Lynwood D. Zinn, M. D.

An unexpected maternal death during a normal pregnancy can produce a profound effect on the patient's family and the medical community. The present case is reported because of the unusual autopsy findings.

Case Report

The patient was a 30-year-old housewife in the sixth month of her second pregnancy. She had no prior medical problems during her pregnancies. Her admission complaints were nausea, vomiting, and headache of one week's duration. She was treated briefly on an out-patient basis without relief of symptoms. The physical examination revealed a blood pressure of 120/80 mm. Hg. and a regular pulse of 80 beats per minute. The ocular fundi were normal. The fetal heart tones were good and no fetal distress was evident. The laboratory work showed a normal complete blood count, an elevated blood sugar of 130 mg. per cent, and a 2+ albuminuria.

The patient had several episodes of vomiting while in the hospital. She was unexpectedly found dead in her bed on the evening of the second hospital day.

Autopsy Findings

At the time of autopsy the gastric contents were noted to be lying free in the left upper quadrant of the abdominal cavity. A large four- to five-centimeter rent was found in the stomach on the anterior surface. The defect began at a point one centimeter below the esophageal-gastric junction and was near the greater curvature. The uterus was enlarged and contained a normal appearing dead male fetus weighing 1,000 grams. The mother's brain weighed 1,550 grams and an intracerebral tumor was found in the right hemisphere in the section taken at the level of the olfactory bulb. The tumor was small, measuring one by one centimeters and was inferior to the lateral ventricle. Evidence of increased intracranial pressure was found.

Microscopically, digestion of the surfaces of the surrounding abdominal organs was identified. No underlying gastric lesion was found. The brain tumor was histologically confirmed to be an oligodendroglioma.

Discussion

The present case is unique in that the patient's sudden and unexpected death was an enigma to the nursing and medical staffs. The autopsy findings were enlightening in explaining the patient's mode of death.

A computer-assisted search through the National Library of Medicine failed to reveal a similar case. Spontaneous gastric rupture is commonly associated with bicarbonate therapy, engorgement of the stomach with fluid and the entrapment of air or oxygen following nasal oxygen therapy.[1] Forceful emesis is nearly always documented in the clinical history. Spontaneous gastric rupture is known to be a catastrophic event and death often ensues rapidly.[2] Often the rupture goes undetected until autopsy or surgery. The spontaneous gastric rupture occurs more commonly on the lesser curvature.[3] Rupture in the cardia region is unusual. Gastric rupture in pregnancy is a rare event and is associated invariably with peptic ulceration.[4] Spontaneous gastric rupture occurring in pregnancy is not known to the authors.

Discussion of this case has brought to mind several similar clinical conditions. The Boerhaave syndrome[5] is a rupture of the esophagus and the Mallowry-Weiss syndrome[6] is a laceration of the esophageal mucosa. Again, forceful emesis has a common role in these entities.

In this case, the patient had not been on bicarbonate or similar antacid therapy. She was not given any nasal oxygen therapy; however, she did have forceful emesis following a meal. It is postulated that the recurrent vomiting was secondary to the brain tumor; the full stomach was compromised by the existing pregnancy, in that, the usual abdominal space was decreased and a stress was put on the stomach during emesis to such a degree to cause rupture.

Although pressure phenomena were present on the brain, they were not thought to be of a terminal degree. The clinical events just prior to the patient's demise do not support a cerebral death.

The Authors

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A list of references may be obtained by writing The Journal.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Assistant Professor of Medicine

Infectious Disease Emergencies—Answers To Questions

Discussant: Jack L. Le Frock, M. D.

Jack L. Le Frock, M. D., Assistant Professor of Medicine, Division of Infectious Disease, West Virginia University Medical Center.

While many infections may cause medical emergencies, I am going to discuss the ones that are seen most frequently in everyday hospital practice. The format of this grand rounds will be questions and answers. I have selected the questions frequently asked of me when I have lectured on these various infectious disease emergencies individually.

What do you consider an infectious disease emergency?

Whenever an infection gives rise to a life-threatening condition with a short period of potential reversibility, prompt and decisive action is necessary to prevent death or serious disability.

What infectious diseases do you consider emergencies?

In the continental United States, I consider bacterial meningitis, fulminating meningococcemia, acute bacterial endocarditis, overwhelming staphylococcal infection, gram-negative bacteremia, and overwhelming pneumonia as infectious emergencies in usual hospital practice. In the tropics and Asia cerebral malaria, blackwater fever, intestinal perforation of typhoid, overwhelming dehydration of cholera or shigellosis, and acute renal failure of Weil's disease are also infectious disease emergencies.

Do you consider fever per se an acute emergency?

Fever per se is very seldom an acute emergency. In infants in whom a seizure may be dangerous, in children prone to seizures, and in elderly patients with heart disease, pyrexia over 103°F should be treated. In the elderly with cardiovascular disease elevated temperatures may threaten the integrity of cardiovascular perfusion. In others temperatures above 106°F present a hazard and should be lowered. Fortunately, hyperpyrexia of this degree is rare in most infections in adults.

Why is bacterial meningitis an emergency?

Most acute bacterial meningitis is a relentless disease. Late treatment means less chance of survival. Skilled management of advanced meningitis cannot compensate for overlooking its early manifestations. Meningitis pursues a fulminating course in some patients with (1) localizing neurologic signs; (2) convulsions; (3) rapid development of coma; and (4) decerebrate rigidity. Death may occur within a few hours after the onset of symptoms.

How do you make the diagnosis of meningitis?

The diagnosis is not difficult when stiff neck, headache, convulsions, coma or rash (in meningococcal infection) are present. In infants meningitis may present as a non-specific illness without fever or nuchal rigidity. Failure to thrive may be the only early manifestation. In elderly patients confusion may be the only presenting sign. For these reasons a high index of suspicion and rapid diagnosis are essential. The only way to make the diagnosis definitively is by lumbar puncture. Table 1 shows the characteristics of spinal fluids of patients with meningitis of various etiologies. After analyzing the spinal fluid, if it is not clear whether partially-treated bacterial meningitis, viral meningitis, or an early tuberculous or cryptococcal meningitis is present, re-tap your patient every 12-24 hours if necessary to make the diagnosis. Since purulent meningitis

TABLE 1

Serial CSF Changes In Meningitis*

	Total WBC	*% Polys*	*% Lymphocytes*	*Protein*	*CSF Sugar/BS*
A. Bacterial, untreated	↑	↑	↓	↑	↓
B. Bacterial, untreated	↓	↓	↑	↓	↑
C. Viral	↓	↓	↑→	N ±	N
D. TB, Fungal	↑ or ±	↓	↑	↑	↓

*Direction of change from initial CSF.

can be caused by any one of a wide variety of bacteria, cultures of blood and spinal fluid sediment should be performed before the initial antibacterial therapy is selected. The type of bacterium responsible for meningitis is clearly related to the age of the patient (Table 2). This age-dependent relationship allows one to make an intelligent guess if nothing is seen on gram stain of the cerebrospinal fluid until the culture results are known.

How is meningitis treated?

The patient with suspected meningitis should have undergone a lumbar puncture and be on treatment within one hour of entering the hospital. Listed in Table 3 are some suggested therapeutic regimens for treating acute bacterial meningitis.

What is the picture of fulminating meningococcemia?

It is a fulminant illness accompanied by convulsions, delirium, coma, hypotension or overt shock. The eruption frequently starts as pink, irregular, macular lesions which are morbilliform in character and are most numerous on the extremities. In most cases, petechiae are also present; they are often detected on the conjunctivae and buccal mucous membranes. In severe infections, hemorrhages develop in the retinae and there may be large ecchymotic areas (suggillations) in the skin. These grave signs are also seen with other types of meningitis but are not characteristically associated with a fulminant course.

TABLE 2

Organisms Recovered From Patients With Acute Bacterial Meningitis of Known Etiology

Age Group	Frequency of Organism Isolated in Descending Order
< 2 mos.	*E. coli*, Staphylococci, Salmonella, Klebsiella-Enterobacter, Streptococci; Pneumococci: *H. influenzae*, Group B Streptococci
2 mos. 5 yrs.	*H. influenzae*, Group B streptococci, Meningococci, Pneumococci
5 yrs.-15 yrs.	Meningococci, Pneumococci, *H. influenzae*
15-50 yrs.	Pneumococci, Meningococci, Streptococci, Miscellaneous gram negatives
50 yrs.	Pneumococci, Meningococci, Gram-negative rods

TABLE 3

Suggested Therapy of Meningitis

Age of Patient	Initial Therapy Until Organism Identified
2 mos.	Ampicillin 75-150 mg/kg/day I.V. plus Kanamycin 15 mg/kg/day or Gentamicin 5 mg/kg/day
2 mos. to 5 years	Ampicillin 300-500 mg/kg/day I.V.
	Definitive Therapy After: Organism Identified
Organisms	*Antimicrobial*
Meningococci	Penicillin G
Pneumococci	Penicillin G
Hemophilus influenza	Ampicillin or Chloramphenicol
Purulent unknown	Chloramphenicol

All above antimicrobials should be administered parenterally.

What are the skin lesions associated with meningococcal meningitis and meningococcemia?

An exanthem is seen in two-thirds of patients with meningococcal disease and is usually most evident on the lower extremities. Although fully developed skin lesions are typically petechial, an initially evanescent morbilliform rash may appear. Purpuric lesions, ranging in size from a few millimeters to many centimeters in diameter are seen in fulminant cases of the disease. Petechiae or purpura may appear during the course of the acute meningococcemia, even before meningitis is chemically apparent.

Bullous lesions are infrequent but do occur. They usually appear after at least 24 hours of illness and are most frequently seen adjacent to the large purpuric areas. Do not forget, however, that petechial skin lesions and purulent meningitis are not diagnostic of meningococcal disease. Meningitis and petechial skin lesions may accompany acute staphylococcal endocarditis, but seldom accompany severe sepsis due to other organisms.

How do you make the clinical diagnosis of meningococcemia?

The diagnosis is made on index of suspicion plus characteristic cerebrospinal fluid findings. Anyone who presents with severe headache and

petechial skin lesions should be considered to have meningococcal meningitis until proven otherwise. Some patients with acute meningococcemia may die even before bacterial invasion of the CNS can be demonstrated. Gram-stained smears of scrapings from petechial lesions will often provide rapid presumptive diagnoses even when organisms are not seen in the spinal fluid. Occasionally the pathogens may also be observed within leukocytes from stained smears of peripheral blood or from the buffy coat. Early in the disease, one may see a normal cerebrospinal fluid (CSF) and you will have to re-tap your patient every 12-24 hours, if necessary, to make the diagnosis.

What is the treatment of meningococcemia?

The antibacterial therapy recommended is identical to that for meningococcal meningitis. Two million units of penicillin are given parenterally every two hours. The shock syndrome is treated with adrenal glucocorticoids and vasopressor drugs; however, this has not improved the rate of survival. Some now advocate rapid-acting cardiac glycosides and isoproterenol, since it has been observed that cardiac failure secondary to myocarditis may be an important factor in the pathogenesis of shock. In meningococcemia, the incidence of disseminated intravascular coagulation (DIC) is increased by the presence of hypotension. Heparin therapy may or may not be effective. High molecular weight dextran has been recommended by some investigators.

What are some causes of persistent fever after therapy of bacterial meningitis?

Despite the effective control of bacterial meningitis, persistent fever may be encountered. The common causes are listed in Table 4. The most deceptive cause of persistent pyrexia in such cases is drug fever. Clues that the fever may be due to a drug are the occurrence of fever after several days of therapy and the fact that the patient upon evaluation does not appear toxic and his clinical course and CSF are improving. Proof lies in the subsidence of the fever after use of the suspected drug has been discontinued. If additional therapy is necessary, the selection of an unrelated drug is recommended.

Is gram-negative bacteremia always a life-threatening emergency?

This question is difficult to answer. Mortality from gram-negative bacteremia exceeds 50 per cent in most institutions. The death rate is even higher when shock is present. Thus, early recognition and prompt therapy are mandatory. In some instances gram-negative bacteremia appears to produce few symptoms and may occur and subside spontaneously. The crux of the problem is probably related to whether or not the gram-negative organism elaborates endotoxin, giving rise to endotoxin shock.

TABLE 4

Causes of Persistent Pyrexia During Therapy of Bacterial Meningitis

1. Ineffective antimicrobial therapy for the CNS infection
   a. Too short treatment or too little drug
   b. Wrong drug
2. Phlebitis
3. Abscess (local or cerebral)
4. Subdural effusion (especially in young infants)
5. Tissue necrosis
6. Drug fevers
7. Tracheotomy tube, urethral catheter or other foreign objects

What do you mean by gram-negative bacteremia and what are the most frequent infecting mico-organisms?

Gram-negative bacteremia is an invasion of the blood stream by enteric organisms or *Pseudomonas*. Gram-negative bacilli are normal inhabitants of the gastrointestinal tract. *Escherichia coli* is responsible for about 40 per cent of cases of bacteremia produced by gram-negative bacilli; *Klebsiella-Enterobacter species* cause about 30 per cent; *Proteus species* cause about 15 per cent; and *Pseudomonas species* are responsible for about 15 per cent.

What are the sources of bacteremia?

The most common source of bacteremia due to gram-negative bacilli is the genitourinary tract. In 60 to 80 per cent of cases the disease is related to urinary tract infection or follows manipulative procedures on the genitourinary tract, such as catheterization, cystoscopy, abortion or surgery. Sources of bacteremia other than the urinary tract are the gastrointestinal tract (especially following surgery), the biliary tree (in association with cholangitis or cholecystitis), the skin (when it is extensively burned or involved in exfoliative dermatitis), and intravenous catheters or cutdowns. Gram-negative bacteremia is particularly frequent in patients with agranulocytosis, leukemia or other conditions associated with leukopenia where the portal of entry may be ulcerations in the gastrointestinal tract.

Why are we seeing an increased incidence of gram-negative bacteremia?

One explanation is the fact that many of the patients who develop this syndrome have serious

underlying diseases (such as leukemia, lymphoma or other malignancies) which are associated with decreased host resistance to bacterial infections. Formerly these patients died of their underlying disease, often untreated. Now they are treated with cytotoxic drugs, corticosteroids and immunosuppressive agents which may prolong life but also further impair host defenses against infection. As a result, the cause of death now is often infection and particularly bacteremia caused by gram-negative bacilli.

What group of people is likely to fall victim to gram-negative sepsis?

(1) the hospitalized patient who is recently the subject of GU surgery or instrumentation; (2) the debilitated patient: his normal tissue integrity has been impaired beyond the point where the tissues can resist invasion by these pathogens. The organisms are most often introduced by a catheter, a tracheostomy tube, or some other source of nosocomial infection; (3) the very young or very old patient; (4) the patient who has had massive doses of antibiotics which have altered the natural microbial enemies of the gram-negative organisms; and (5) the immunodeficient patient such as a leukemic or a transplant recipient.

What are the clinical clues to the presence of gram-negative bacteremia?

There must be an unusually high index of suspicion in the settings just mentioned. Classically the disease presents with an abrupt onset of shaking, chills, fever, prostration, and occasionally nausea and vomiting within one to two hours after manipulation of a catheter, infected wound or GU instrumentation. Mild hypotension followed by peripheral vasoconstriction, more pronounced drop in blood pressure, and oliguria usually appear within two to six hours after the initial manifestations. It is not difficult to recognize gram-negative sepsis when it appears in its classic form. At times, however, the only early signs of gram-negative sepsis are mild fever, hyperventilation and unexplained confusion. The diagnosis may be very difficult to make in the very old and the very young. Some of the ways in which gram-negative bacteremia may present are listed in Table 5.

What is the therapeutic approach when gram-negative bacteremia is suspected?

I feel the most important aspects of management are: (1) prompt recognition of the impending clinical picture and its source; (2) identification of the etiological agent and determination of its susceptibility to antimicrobial agents; (3) administration of adequate parenteral doses of an appropriate antimicrobial; (4) drainage of purulent accumulation, removal of foreign bodies or correction of obstructive lesions; and (5) prevention and management of complications.

TABLE 5

Clinical Features Suggestive Of Gram-Negative Bacteremia

1. Chills, fever and hypotension
2. Hypotension without evident cause
3. Thrombocytopenia without evident cause
4. Fever alone (especially in patients with malignancies, hematologic and urinary tract disease, following instrumentation, or with intravascular catheters or foreign bodies
5. Tachypnea, hyperpnea, or respiratory alkalosis without evident cause
6. Oliguria or anuria without apparent cause
7. Hypothermia
8. Unexplained change in mentation (agitation, confusion, etc.)
9. Acidosis without apparent cause
10. Evidence of pulmonary infection (associated with ventilatory assistance)
11. Evidence of urinary tract infection

Cultures should be obtained from specimens of blood, urine, sputum, exudates, wound drainage and intravenous catheters. Table 6 lists the antibiotics and dosages which are most effective against the usual etiologic agents of gram-negative bacteremia.

What measures must be taken in addition to antibiotic therapy to treat patients with gram-negative bacteremia?

Once the most important aspect of treatment, aggressive antibiotic therapy, has been started,

TABLE 6

Antibiotics of Preference for Initial Therapy In Presumed Gram-Negative Bacteremia

Suspected Micro-organisms	Antimicrobial Agents
Escherichia coli	Kanamycin or Polymyxin B
Klebsiella sp.	Kanamycin or Polymyxin B or Gentamicin
Enterobacter sp.	Gentamicin or Polymyxin B
Serratia sp.	Gentamicin or Kanamycin
Pseudomonas aeruginosa	Gentamicin & Carbenicillin Polymyxin B
Proteus mirabilis	Ampicillin or Kanamycin
Herellea sp. or Mimeae sp.	Kanamycin or Gentamicin or Polymyxin B
Proteus vulgaris, P. morganii or P. rettgeri	Gentamicin or Kanamycin
Bacteroides sp.	Clindamycin or Chloramphenicol

other supportive therapy should be attended to as:

(1) Monitoring the the central venous pressure or pulmonary wedge pressure and urine output.

(2) Digitalization of the patient.

(3) Prophylaxis against hypovolemic shock (fluids).

(4) Isoproterenol may be effective in some patients with bacteremic shock who do not respond to volume expansion and administration of vasopressors.

(5) The role of alpha-adrenergic blocking agents and adrenal glucocorticoids in the treatment of septic shock is controversial. Large doses of adrenal glucocorticoids given over a short period (one to two days), however, are probably harmless and may be beneficial.

What forms of staphylococcal infection are a threat to life?

Deep-seated staphylococcal infections are always dangerous and patients may die with staphylococcal endocarditis, staphylococcal empyema, staphylococcal pericarditis, staphylococcal meningitis or staphylococcal peritonitis. Usually these complications are recognized readily and fortunately are not very common. Staphylococcal pneumonia is more common, more subtle and may be fulminating and rapidly fatal.

What are the clues to recognizing staphylococcal pneumonia?

When the diagnosis of staphylococcal pneumonia is missed, the outcome is usually fatal. Staphylococcal pneumonia is rarely, if ever, a primary disease. It is usually secondary to staphylococcal infection elsewhere in the body, bacteremia, or viral infection of the lungs (influenza for example), or occurs as a superinfection during antibiotic therapy for another disease.

There are two types of staphylococcal pneumonia—one in conjunction with viral influenza and the other in patients with disseminated staphylococcal disease secondary to bacteremia. The type that occurs in conjunction with viral influenza has a fulminating course characterized by dyspnea, cough, cyanosis, fever, evidence of oxygen desaturation, and rapid death. The chest x-ray usually shows bilateral infiltrates. There is high fever, but the white count is normal or low. Staphylococci are present in the scanty sputum in large numbers. The outcome may be fatal despite the administration of penicillinase-resistant antimicrobrials and steroids.

The second type consists of multiple small lung abscesses which are seen in patients with disseminated staphylococcal disease. These lesions may produce relatively few symptoms, but unless they are recognized for what they are, namely a sign of hematogenous dissemination which is always serious, treatment may not be successful. The chest x-ray may show the characteristic thin-walled abscess cavities throughout the lung.

How does fulminating pneumonia present?

Some patients with acute bacterial pneumonia may have a life-threatening illness characterized by fever, chills, pleuritic pain, severe productive cough, mental confusion, cyanosis and systemic arterial hypotension. Chest x-rays may show extensive infiltrates which rapidly progress to segmental or lobar consolidation, abscess formation or pleural empyema.

In what type of people does one see fulminating pneumonia?

This rarely occurs in otherwise healthy individuals but usually develops in people with serious underlying diseases. Examples of such patients are those with severe influenza, chronic alcoholics, immunosuppressed patients, debilitated post-operative patients, patients with bone marrow aplasia, and renal transplant recipients with chronic rejection.

What role does host-defense play in the development of fulminating pneumonia?

Since pulmonary tissues are readily and almost continuously exposed to particulate aerosols that contain viable microorganisms, it is easy to see the importance of host-defense mechanisms in the balance between health and disease. Infection appears to take hold only when one or another of the host's defense mechanisms is suppressed or the innoculum size is so great as to overwhelm the host defenses. Table 7 lists the six major host defense factors.

What is the diagnostic approach to fulminating bacterial pneumonia?

The number of infectious agents that can produce fulminating bacterial pneumonia is fairly

TABLE 7

Host Defense Factors In Pulmonary Infections

1. Airway structure
2. Pulmonary transport systems
3. Phagocytic bactericidal activity
4. Non-specific mechanisms
5. Non-phagocytic mechanisms
6. Granulomatous response

large. As effective antibiotic agents become available for an increasing variety of microorganisms, it becomes even more important to make specific diagnoses especially where the determination of the exact etiology would have an important bearing on selecting a therapeutic agent. As an example, it is of critical importance to know whether the etiologic agent is a pneumococcus or staphylococcus.

It is also important to have specific information about the antibiotic sensitivity pattern of the organism in order to select the appropriate drug for therapy.

At least three sets, preferably six, of blood cultures should always be obtained before therapy is initiated. When pleural effusions are present, smears and cultures of the fluid should be done for bacteria, AFB, and fungi before therapy is started. A gram-stain of the sputum (not saliva) may help one to make a presumptive etiologic diagnosis until cultures come back. However, one must see numerous predominating bacteria in and around polymorphonuclear leukocytes. It is better to obtain specimens for smear and culture by transtracheal lung aspiration because contamination is eliminated by oropharyngeal secretions and there is a higher yield of anaerobes.

What is the treatment of fulminating pneumonia?

The treatment depends on the organism isolated and its sensitivity pattern. Table 8 lists some suggested therapy for the treatment of fulminating pneumonia. If a patient has empyema, prompt surgical drainage is also indicated.

When is bacterial endocarditis an emergency?

Usually subacute bacterial endocarditis progresses relatively slowly and an appropriate time can be permitted to elapse to determine the causative organism. The acute form, however, does represent a potential cardiac emergency which necessitates rapid diagnosis and treatment to preserve cardiac integrity and to halt unremitting infections which may be fatal. Patients with acute bacterial endocarditis are prone to three dreaded complications: (1) cerebral embolism with stroke or formation of mycotic aneurysm with eventual bleeding; (2) embolic or diffuse nephritis and uremia; or (3) rupture or perforation of one of the valves (particularly the aortic valve) resulting in aortic regurgitation and heart failure.

TABLE 8

Causes and Specific Therapy Of Bacterial Pneumonias

Cause	Antimicrobics of Choice
Klebsiella species	Chlorampenicol plus Streptomycin Kanamycin, or Gentamicin
Streptococcus pneumoniae (Pneumococcal)	Penicillin G
Staphylococcus aureus	Cephalothin, Oxacillin, Nafcillin, Clindamycin
Hemophilus influenzae	Ampicillin, Chloramphenicol
Pseudomonas aeruginosa	Gentamicin, Carbenicillin, Polymyxin
E. coli	Ampicillin, Kanamycin

What are the clinical clues that endocarditis may be acute?

Fever is usually spiking in nature but may be minimal or absent, especially in the neonate, the elderly, or the patient with altered host defense mechanisms. Fever is generally accompanied by signs of metastatic infection. The particular signs are dependent upon which organ system is involved by the bacteremia. Changing cardiac murmur is typical of acute endocarditis which may progress to signs and symptoms of intractable congestive heart failure secondary to valve rupture or fenistration.

How do you approach a patient with acute endocarditis?

The most important laboratory aid is obtained from blood cultures. At least three, and preferably six, blood cultures should be drawn to avoid misinterpretation. All sites of obvious metastatic infection such as sputum, spinal fluid, joint fluid, material obtained from aspiration of skin lesions and urine should be similarly cultured. All cultures should be taken in a relatively short period of time and therapy started immediately. Remember, the diagnosis must be made clinically and one chooses antibiotic therapy based upon immediately available information, bacteriologic statistics and examination of sputum, pus, etc. with gram or other appropriate stains. Because the staphylococcus is so often the causative organism in acute bacterial endocarditis, I feel maximal doses of a penicillinase-resistant drug (Cephalothin, Oxacillin, Clindamycin, etc.) given parenterally is the antimicrobial treatment of choice. If enterococcal infection is suspected, Penicillin and Streptomycin or even Vancomycin may be used. Vancomycin is active against both penicillinase-producing staphylococci and enterococci.

Summary

We have discussed acute bacterial meningitis, fulminating meningococcemia, acute bacterial endocarditis, overwhelming staphylococcal infection, gram-negative bacteremia, and overwhelming pneumonia. Because these conditions produce severe, acute illnesses with a short period of potential reversibility, prompt and decisive action is necessary to prevent death or serious disability.

Often antibacterial therapy must be initiated on the basis of a presumptive etiologic diagnosis after suitable smears and cultures have been obtained, but before the pathogen has been definitely identified or its *in vitro* susceptibility has been determined. Knowing the location of the infection, the circumstances involved in its development and the results of gram-stained smears of exudates, abscesses, infected body fluids, etc. will assist the physician in formulating a presumptive etiologic diagnosis. Knowledge of the antimicrobials that are likely to be effective against the suspected pathogens will provide a rational basis for selection of therapy until the results of microbiologic studies are available.

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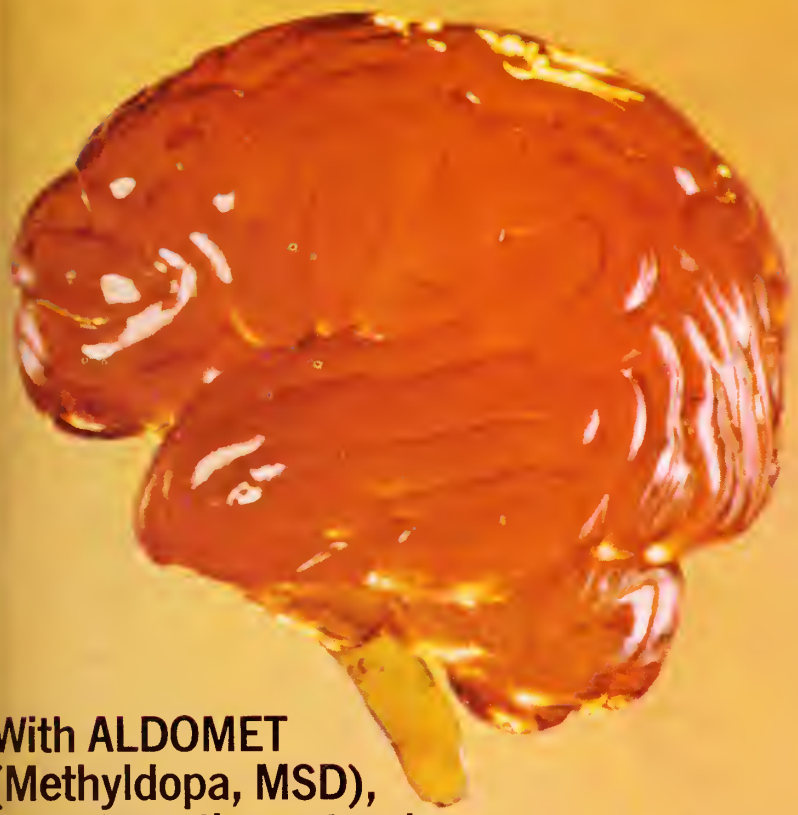

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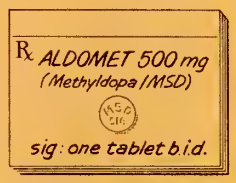
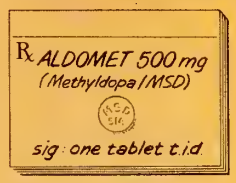
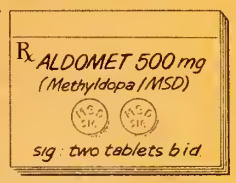
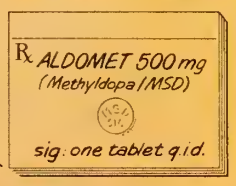


1.5-g daily dose =



2.0-g daily dose =





NOTE: Tablets shown are not actual size.

in sustained moderate hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis. Known sensitivity. Not recommended in pheochromocytoma. Unsuitable in mild or labile hypertension responsive to mild sedation or thiazide therapy. Use cautiously in patients with history of previous liver disease or dysfunction.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between six and twelve months of therapy. Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood.

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia. Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at six and twelve months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued. Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted. When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only. The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped.

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood. In the absence of hemolytic anemia, usually only the direct Coombs test will be positive. A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first three weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first two to three months of therapy. In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first six to twelve weeks of therapy or whenever an unexplained fever occurs. If fever, abnormalities in liver function tests, or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, reversible reduction in leukocyte count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely. When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur.

Use in Pregnancy and Childbearing Age—Not recommended in pregnancy. In women of childbearing age, weigh potential benefits against possible fetal hazards.

Precautions: Methyldopa may interfere with measurement of: uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, spuriously high levels of urinary catecholamines may be reported. This will interfere with the diagnosis of pheochromocytoma. Stop drug if involuntary choreoathetotic movements occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has occurred after dialysis in patients on methyldopa because the drug is removed by this procedure.

Adverse Reactions: Sedation, usually transient, may be seen during initial therapy or when dosage is increased. Headache, asthenia, or weakness may be noted as early, transient symptoms. Symptoms associated with effective lowering of blood pressure are occasionally seen and include dizziness, lightheadedness, and symptoms of cerebrovascular insufficiency. Angina pectoris may be aggravated. Symptoms of orthostatic hypotension may occur; if symptoms occur, reduction of dosage is suggested. Bradycardia, nasal stuffiness, mild dryness of mouth, and gastrointestinal symptoms including distention, constipation, flatus, and diarrhea occur occasionally; these generally can be relieved by reducing dosage. Nausea and vomiting have been reported in only a few patients. Sore tongue or "black tongue," pancreatitis, and inflammation of salivary glands may occur.

Weight gain and edema occur infrequently and are relieved by administering a thiazide diuretic; if edema progresses or signs of pulmonary congestion appear, discontinue drug. A rise in BUN has been observed. Other rare reactions include breast enlargement, lactation, impotence, decreased libido, skin rash, mild arthralgia, myalgia, paresthesias, Bell's palsy, parkinsonism, psychic disturbances including nightmares, reversible mild psychoses or depression. Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Note: Dosage should be limited initially to 500 mg daily when following previous antihypertensive agents other than thiazides. Maximal recommended daily dose is 3.0 g. Patients with impaired renal function may respond to smaller doses than patients with normal kidney function. Syncope in older patients has been related to increased sensitivity in those with advanced arteriosclerotic vascular disease; this may be avoided by lower doses. Tolerance occasionally seen either early or late, but more likely between second and third month after initiation of therapy; increased dosage or combined therapy with a thiazide frequently restores effective control.

How Supplied: Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000; Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

THE WAY SOME PEOPLE CONTROL PENSION OR PROFIT SHARING FUNDS IS A CRIME

Scattered around among the more than 200 pages of the Employee Retirement Income Security Act of 1974 are various civil, criminal and excise tax enforcement devices that could trip you up.

Unless you — your co-managers — or those you appoint to manage follow every rule and prohibition — you could be held personally liable. That's a new wrinkle!

As if heavier responsibility wasn't enough, the overall cost of retirement programs is also going up. You'll have to come up with a money management strategy that will meet these new financial requirements.

Your best bet in all this may be to assign responsibility to a corporate trustee. To a bank. Union National Bank. Here's why:

Our trust department, (fifteen of us) is used to working under all kinds of financial regulations. We have the administrative and money management capabilities you may need. We already have complete trustee authority on some plans —and manage investments for large, established plans. We help design plans for individual corporations from scratch —or act as trustee and invest the dollars of plans already in existence.

We have experts in common stocks, bonds, land, minerals, oil, gas—all areas of investing. (Not surprising when you remember we are the state's fifth largest bank.)

There's another advantage in doing business with a Clarksburg bank; we give you personal service — instead of long distance phone calls. We'll see you in the bank tomorrow, so you can be sure we're going to do our best for you today.

Think it over. And if you think we can be of help, come in. Or call John Lowe at 623-3631.

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A message from . . .

The President

FRESH SCAR, ANYONE?

One of my first statements to new arrivals on the Health Care Team is that I think *everyone* who is associated with patients' services should have a *scar!* This announcement has several effects: it quickly brings everyone awake and, whatever their previous attitudes, it inscribes in their minds a fresh awareness of personal feeling.

Whether it is an annual investigation, a gastric resection, or treatment for coronary occlusion; whether it is a "work-up" or a "work-down," a patient *submits* himself and his humors to a health care person—to you or to me.

In submission, our patient has a health problem which, for the moment at least, he must accept. Invariably, a series of indignities will follow which he would rather not accept! And finally, usually in success, but occasionally in failure, our patient must pay for it all!

So I say, for those of us with lasting and vivid memories, a scar is a priceless possession. Scarred physicians can reduce or soften, yes, *eliminate*, may of the indignities patients bear. Who but the Physician from Galilee suffered indignity with fresh scars, that we should care?

Bill Gilmore

William E. Gilmore, M.D., *President*

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EDITORIALS

HIGH BLOOD PRESSURE MONTH

The month of May has been set aside as "High Blood Pressure Month." It is noteworthy that last year over 40,000 West Virginians were screened for hypertension, and 4,000 who had a blood pressure above the normal limits were referred to their physicians for further evaluation and treatment. This wide interest in screening for hypertension is commendable, and it is to be hoped that an active screening program will be continued throughout the year.

The question has been raised by a few physicians who claim that by calling people's attention to their elevated blood pressure may produce a serious anxiety and in some instances hypochondria. This, of course, does occasionally happen. If a personal note may be permitted, the author of this editorial (at the time a young man), when teaching a class in physiology, stated that a diastolic blood pressure above 90 mm. of Hg was probably dangerous and such a person should seek prompt medical guidance. The next morning a student who had found his diastolic pressure was well over 90 mm. of Hg came in and stated that he had spent a restless and sleepless night worrying about his high blood pressure. A quiet talk with this student helped allay his anxiety, although in those days there was no specific anti-hypertensive therapy.

The fact that anxiety may be produced in some people when they are informed that they have an elevated blood pressure should in no way deter hypertensive screening. These people can now reasonably be assured that present day anti-hypertensive therapy can lower their blood pressure to an acceptable level.

It should be mentioned that what constitutes a normal diastolic pressure still remains a debatable question. Some clinicians hold that apparently healthy people may have a diastolic pressure of 100 mm. Hg. or even 105 mm. Hg and live long useful lives. The preponderance of evidence, however, indicates rather clearly that a diastolic pressure of 90 mm. Hg or less is highly desirable. People who have, or can maintain low diastolic pressure are more likely to live appreciably longer lives and are much less likely to suffer dangerous sequelae often associated with hypertension, such as cardiomegaly and strokes, as well as renal and coronary disease.

In the final analysis, patients who have a high blood pressure should be informed that they (like some patients who have glaucoma or diabetes) probably will have to take some form of anti-hypertensive medication all of their life. While this may be regarded by some as a distinct nuisance, it is, after all, a small price to pay for the benefit that their therapy affords.

Requests for abortions come from varied sources: There was the frightened 16-year-old single girl who had Hodgkin's disease and was told by her internist that she had to be aborted before irradiation therapy for her disease; there was the heartbroken expectant mother who suffered an abortion of a much wanted child because she had to have treatment for her cervical cancer; there was the flippant patient who bolstered her own courage by an appearance of callousness as she came into the office saying, "Doc, I just want you to tell me if I'm pregnant for sure 'fore I go to Washington to have it taken care of."

WHAT IT'S LIKE TO DO AN ABORTION

As a gynecology resident I spent two hours each week either interviewing or listening to interviews of patients who desired abortion. Not all of these patients were unmarried by any stretch of the imagination. Their reasons for requesting abortion varied all the way from criminal rape to matters of rather trivial convenience. An attractive young coed would say, "We want children, but not this year. My husband just finished college and I have one more year to go."

A tall blond nursing student from another medical center in the state came in with written consultations from the Chief of the Ob-Gyn service and the Chief of the Psychiatric service of her school stating that she needed an abortion because of her mental health.

A gaunt, distraught mother of three small children said that her husband was overseas in the Army and that if he found out about her pregnancy, it would destroy her home.

In each instance the individual patient must be considered. After a complete history and physical examination, the possible alternatives to abortion need to be discussed. These include carrying the baby to term and either keeping the baby or giving it up for adoption. In either event the choice of marriage or not is at the discretion of the patient. I have never felt that it was a part of my job to make these decisions for the patient. Rather, I try to listen and to help the patient crystallize her own thinking in a situation which is agonizing and unhappy for her.

I try to avoid imposing my own views on my patient as to whether abortion is destroying another life. It seems that most people do not conceive of it in this way.

As a resident I had many hours of discussion concerning this matter. Strange that we should ever dream that we can resolve such difficult questions in the wee hours of the morning—sleepy-eyed and nodding over cups of coffee in a labor suite. I noticed that the other members of the resident staff who did not have to actually do the abortions seemed to accept this new practice in American medicine more easily than did we Ob-Gyn residents.

My own study of fetal development convinces me that the unborn child is a living human being from the moment of conception, and that he rapidly develops unique and individual body and personality traits.

You might ask, then, how I could possibly perform an abortion while holding this concept. Let me reply by posing a different, yet similar question. What would you do if you looked into a room and saw one individual holding a gun on another saying, "I am going to kill you."?

If you knew that the individual was indeed going to kill the other one, and you had the power to stop that individual by killing him first, would you do it? If your answer to that question is yes, then there are certain conditions under which you would do an abortion.

If the abortion is done in the first three months of pregnancy, it may be done by a dilatation and curettage. The patient is anesthetized and, after sterile preparation, the cervix is dilated slowly and gently so that it is not torn. Frequently a trickle of blood flows from the uterus at this point. Usually, intravenous fluids containing Pitocin are running. This stimulates the uterus to contract so that the bleeding will be minimal.

A probe or sound is then passed into the uterine cavity to measure the depth—usually about five inches. Considerable care is taken to avoid pushing the probe through the top of the uterus because the enlarged pregnant uterus is soft and would allow the probe to pass through the muscular wall more easily than normal.

Occasionally the fluid-filled sac around the embryo ruptures at this point, and a gush of water appears in the birth canal. Whether this happens or not, however, a forceps is passed into the uterine cavity and the remnants of the pregnancy are removed.

A curette is then passed into the uterus and all the remaining product of conception is scraped away from the uterine wall. When the muscular wall of the uterus is reached there is a scraping sound sometimes called the curette tone or the "cry of the uterus."

A more sophisticated method of performing early abortion employs a suction curette. This is a round plastic tube with an opening at the end. This is passed into the uterus and a moderate amount of suction or vacuum is applied via a rubber tube. As this instrument is rotated and pushed in and out of the uterus, the operator can see the parts of the embryo and the placental tissue pass together through the plastic tube.

Most doctors who have had to perform this procedure develop an increasing distaste for it. It is difficult to maintain a mental image of one's self as a helper of humanity and a destroyer of disease when you see the budding promise of a new individual crumpled into a red, pink and white mass in a bottle.

Yet, I have performed abortions. There have been circumstances where I felt that this was the only course to follow. I must confess, however, that before each one there is a moment when you stand before God, as it were, and ask yourself: "Is this the right thing?"

In the instance of the nursing student who came with consultations in hand, the decision was especially difficult. One should have confidence in the doctors who are his consultants; however, each one of us must make decisions for ourselves. Otherwise we would become just tools following procedures decided upon by others.

The decision to perform an abortion is a difficult one under any circumstances, and it is one upon which men of good will cannot agree even when discussing it in a serene atmosphere. However, there are times and circumstances when the patient and I together can find no other course.—*Guest Editorial by T. Keith Edwards, M. D., Member of the Staff, Department of Obstetrics and Gynecology, Bluefield Sanitarium, Bluefield, West Virginia.*

NEW SKILLS BRING SELF-RESPECT AT BRONCO JUNCTION

This past summer I worked at a summer camp. You might think, so what, lots of people do! This camp, however, *Camp Bronco Junction*, is for children, ages 6 to 15, who have chronic bronchial asthma. The camp is located in Putnam County, near Charleston, West Virginia.

At Bronco Junction I was one of several counselors and my job was to serve as a camp craft instructor. My Boy Scout background provided me with the knowledge to teach these crafts. We did such things as build different types of fires, learn to tie and use various knots, take nature hikes and go on over-night camping trips—a first for many of these children. One of our most difficult and time-consuming projects was carving a ten-foot totem pole decorated as we thought appropriate for the camp.

Without thinking, I had taken most of the above skills for granted—that was my first mistake. These children with chronic asthma had not been doing the "normal" things. A majority of them are usually allowed to sit and read comic books or watch television. So when they came to camp, an instructor really had to teach.

At first I wondered why these children didn't know how to do these simple things. I had forgotten that someone had had the interest and patience to teach me the same things a few years ago. All these children needed, however, was a little extra interest, patience and training. Once the camper mastered a new skill, he grew through using his new skill—no matter how large or small. He responded by lending a helping hand in many ways—from clearing new hiking trails to just helping a friend master the same skill he had just learned.

I was part of a *team* at Bronco Junction. We strived to *help* asthmatic children. Like most other summer camps, it isn't perfect; however, it provides an experience which helps a youngster achieve a sense of self-respect. Bronco Junction helps young people learn to live with their "handicap"—bronchial asthma—and become more like the "normal" 6- to 15-year-old. I believe this surely is one of the best reasons for such a camp.

I certainly didn't become rich insofar as money is concerned while working one summer at Bronco Junction. I did, however, get a satisfying feeling from working and learning with the campers. The non-material payment is one I'll not forget for years to come.

Just being there and knowing I helped a few children gain a little more confidence and knowledge—even to a small degree—was worth more than I could have received in money.

My summer at Bronco Junction wasn't really a job; it was a chance to help someone achieve something I had already had the pleasure of doing and had taken for granted. I feel we helped these young people receive some of the same opportunities which had been given to us by others along the way as we grew up so that they, too, learned to live a more "normal" life.—*Guest Editorial by Larry W. Hamilton of Charleston, Counselor and University Year for Action Intern at Bronco Junction, 1974.*

GENERAL NEWS

'Symposium on Cancer' Scheduled During 108th Annual Meeting

Dr. Arvin S. Glicksman of Providence, Rhode Island, has accepted an invitation to participate in a symposium on "New Concepts in Cancer Diagnosis and Therapy" during the 108th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 20-23.

Doctor Glicksman is Chairman of the Department of Radiation Oncology at the Rhode Island Hospital in Providence and served as a faculty member at several other institutions prior to accepting his present position in 1973.

Philip M. Sprinkle, M. D.
Program Chairman

Dr. Philip M. Sprinkle, Chairman of the Program Committee, announced previously that Dr. Raymond B. Weiss of the WVU Medical Center will serve as Moderator. In addition to Doctor Glicksman, the following prominent physicians and surgeons have accepted invitations to participate in the symposium which will be held during the first general scientific session on Thursday morning, August 21:

Dr. Ariel C. Hollinshead of Washington, D. C., Professor of Medicine at the Laboratory for Virus and Cancer Research, George Washington University School of Medicine.

Dr. Vincent T. DeVita, Jr., Director of the Division of Cancer Treatment of the National Cancer Institute in Bethesda, Maryland.

Dr. Paul B. Chretien, Department of Surgery, National Cancer Institute, Bethesda, Maryland.

Second General Session

Doctor Sprinkle said that the program for the second general scientific session on Friday morning would be devoted to subjects of interest in the fields of pediatrics, surgery and obstetrics and gynecology. He said the three speakers that morning would be as follows:

Dr. Russell V. Lucas, Jr., formerly a member of the faculty at the West Virginia University School of Medicine and currently serving as Professor of Pediatrics at the University of Minnesota Medical School.

Dr. Paul B. Chretien of Bethesda, Maryland, who also will speak at the first general scientific session on Thursday morning.

Dr. Charles A. White, Jr., Professor and Chairman of the Department of Obstetrics and Gynecology at the West Virginia University School of Medicine.

Third General Session

Doctor Sprinkle also announced that the third and final general scientific session on Saturday morning will be a "Mini-Diabetic Seminar."

He said that Dr. John W. Traubert of Morgantown will serve as Moderator. Doctor Traubert is Chairman of the Department of Family Practice at the West Virginia University School of Medicine. Speakers for this session have been selected and their names and additional information will be published in the June issue of *The Journal.*

Doctor Traubert also has been asked to present a report at the Saturday morning session on "Family Practice in West Virginia—1975." He was installed last month as President of the West Virginia Chapter of the American Academy of Family Physicians.

AMA President Honor Guest

It was announced previously that Dr. Max H. Parrott of Portland, Oregon, will deliver an address at the first session of the House of Delegates on Wednesday afternoon, August 20. Doctor Parrott will be installed as President of the American Medical Association during the annual meeting in Atlantic City next month.

Other business sessions during the Annual Meeting will include the Pre-Convention Meeting of the Council on Wednesday morning, August 20, and the final session of the House of Delegates on Saturday afternoon, August 23.

Dr. William E. Gilmore of Parkersburg will deliver his Presidential Address at the final session of the House of Delegates.

Breakfast Meetings Planned

Doctor Sprinkle said officers of the various sections and affiliated societies have been requested to

hold breakfast meetings of their groups if they plan to meet during the Annual Meeting. He said that this format was initiated during the 1974 meeting and proved to be highly successful as it enables physicians and guests to enjoy the wonderful recreational facilities available during the afternoon hours.

Members of the Association are encouraged to send in reservation forms to obtain room accommodations at The Greenbrier as soon as possible.

State Anesthesiologists Schedule Annual Meeting, June 21

The Annual Meeting of the West Virginia State Society of Anesthesiologists will be held on Saturday, June 21, at the Lakeview Inn and Country Club in Morgantown.

Dr. Richard B. Knapp of Morgantown, Secretary-Treasurer, and Professor and Chairman of the Department of Anesthesiology at the West Virginia University Medical Center, will serve as Chairman for the program, entitled "Anesthesia Update '75."

Registration will begin at 7:45 A. M., followed by welcoming remarks by Dr. John E. Jones, Dean of the WVU School of Medicine.

The speakers and their topics will be:

"Premedication—Yesterday, Today, Tomorrow"—Allen E. Yeakel, M. D., Professor and Chairman, Department of Anesthesiology, The Milton S. Hershey Medical Center, Pennsylvania State University, Hershey, Pennsylvania; "Present Status of the Halogenated Anesthetics"—Joseph F. Artusio, Jr., M. D., Professor and Chairman, Department of Anesthesiology, New York Hospital—Cornell Medical Center;

"The Effects of Anesthesia on the Fetus and Newborn"—Brad Smith, M. D., Professor and Chairman, Department of Anesthesiology, Vanderbilt University; "Peridural Anesthesia—Recent Basic Concepts—Newer Uses—New Agents"—Peere Lund, M. D., Director, Department of Anesthesiology, Conemaugh Valley Memorial Hospital, Johnstown, Pennsylvania;

"Perioperative Management of Cardio-respiratory Failure"—John Hedley-Whyte, M. D., Anaesthetist-in-Chief, Beth Israel Hospital, Harvard Medical School; "Obstacles to Emergency and Critical Care Delivery"—Peter Safar, M. D., Professor and Chairman, Department of Anesthesiology, University of Pittsburgh.

The dinner speaker will be Doctor Yeakel, whose topic will be "Psychokinetic Determinism in Surgigal Emergencies."

The meeting has been approved for four hours of prescribed credit by the American Academy of Family Physicians.

Registration fees will be $10 for practicing physicians and $5 for practicing nurses. There will be no fee for residents, interns and students. Checks should be made payable to the West Virginia State Society of Anesthesiologists and mailed to: Ms. Linda Richey, Department of Anesthesiology, West Virginia University Medical Center, Morgantown 26506.

Reservations for Lakeview should be made before June 1 with Ms. Sherry Shaffer, Lakeview Inn and Country Club, Route 6, Box 88-A, Morgantown 26505.

Bronco Junction Gains National Impact Since Founding

What began as an asthma conditioning program of the Charleston YMCA seven years ago is now the basis of similar efforts for the rehabilitation of the asthmatic in some 80 other YMCA-type facilities and outpatient clinics throughout the United States. Camp Bronco Junction, located near Charleston in Putnam County, now draws from 60 to 70 campers from West Virginia and throughout the United States each summer.

The eight-week summer camp provides a rehabilitation and recreation program for children who have chronic bronchial asthma. Its purpose is to prepare these children for normal physical and emotional development through medical/allergy treatment, physical conditioning and camping activities under constant medical supervision.

See editorial on Page 123

It is operated by Allergy Rehabilitation Foundation, Inc., a non-profit, tax-exempt corporation developed by the camp Medical Director, Dr. Merle S. Scherr, a Charleston allergist.

Cabooses and bunk cars, donated by the nation's railroads, are permanently located along a standard-gauge track at the 176-acre camp. They have been renovated to provide housing for each unit of eight campers and two counselors.

Each camper receives individual attention. The regimen prescribed by his home physician is strictly followed, any modification being attempted only after the combined consultation of his physician, the Medical Director and the camp's resident physician. At the end of the camp season, the camper's physician will receive a progress summary. He is expected to assist in the 10-month follow-up of his patient's progress.

An infirmary with physicians and registered nurses in attendance is available to meet the campers' requirements. Charleston Area Medical Center, Memorial Division, is used locally. The National Jewish Hospital and the Children's Asthma Research Institute and Hospital, both in Denver, stand ready to accept any camper during the summer who needs more specialized care.

In addition to the Medical Director, there are physicians in residence, registered nurses, a resident dietician, and medical students, who serve as special counselors.

The Camp Director's staff members are specialists in their own fields. The campers receive care from some 30 volunteer physicians. In rehabilitative aspects, Bronco Junction relies heavily on the creation of close relations of mutual respect and confidence between campers and staff.

The 1975 session is scheduled from June 22 to August 17. Recommendation by the prospective camper's physician must accompany each application.

William H. Lively Resigns Position With State Medical Association

The Council of the State Medical Association has accepted the resignation of Mr. William H. Lively as Executive Secretary effective May 1.

William H. Lively

Charles R. Lewis

Mr. Lively's resignation was announced in March by Dr. William E. Gilmore of Parkersburg, President.

Meanwhile, it was announced in April by Dr. A. Thomas McCoy of Charleston, Chairman of the Association's Council, that Mr. Charles R. Lewis of Charleston has been named to succeed Mr. Lively, effective May 1.

Mr. Lively joined the staff of the Association in 1955, after he received a Master's degree from the Columbia University School of Journalism. He also received a degree in Journalism from West Virginia University in 1954.

Following the death of his father, Charles Lively, who served 20 years in the same position, Mr. Lively was named Executive Secretary in 1961. He also has served as Managing Editor and Business Manager of *The West Virginia Medical Journal.*

During his 20 years of service with the Association, Mr. Lively also was involved in other public health activities and served a term as President of the West Virginia Public Health Association.

Mr. Lewis comes to his new position after serving as Executive Director of the West Virginia Medical Institute since late 1973. Prior to that time, Mr. Lewis was Executive Director of the West Virginia Railroad Association for eight months. He was a member of the staff of the State Medical Association, as Executive Assistant, for two years before resigning in 1972 to join the Railroad Association, and also has served the Medical Association as Projects Director.

Mr. Lewis, a native of Middleport, Ohio, was an Associated Press newsman in West Virginia for 17 years, and Executive Secretary of the West Virginia Department of Welfare for seven years. He is a graduate of Ohio University.

The new Executive Secretary, who started his newspaper career on the Canton (Ohio) Repository, was legislative and capitol correspondent for the Charleston Bureau of the Associated Press. He and Mrs. Lewis, the former Miss Jane Veazey of Charleston, are the parents of two sons and three daughters.

Two Hospital CME Programs Approved By Association

The continuing medical educational programs of two West Virginia hospitals have been approved by the State Medical Association, through its Committee on Medical Education and Hospitals.

Approved by the Committee at its meeting on March 23 in Charleston were the continuing medical education programs at St. Mary's Hospital in Huntington and Charleston Area Medical Center (CAMC).

St. Mary's Hospital was granted a two-year provisional accreditation for a newly-developing program and, CAMC, a one-year provisional accreditation for a newly-developing program, both effective March 23, 1975.

Credit for Category 1 of the American Medical Association's Physician's Recognition Award will be retroactive to November 20, 1974 for the St. Mary's program; and to January 15, 1975, for CAMC.

Association Endorses 'Uterine Cancer Task Force' Program

The Uterine Cancer Task Force program of the American Cancer Society, West Virginia Division, was endorsed by the Council of the State Medical Association at its meeting on April 13 in Charleston.

By the endorsement the Medical Association is recommending to all physicians in the State that they ask all female patients if they have had a Pap test.

The Cancer Society has been in the process of gathering endorsements from all concerned groups, such as women's organizations and other health bodies. The American Cancer Society started the program in 1973 with the goal of having every woman in the United States tested by 1976.

The program was explained at the Council meeting by Dr. Tara Sharma of Huntington, Chairman of the Uterine Cancer Task Force Committee of the Board of Directors of the American Cancer Society, West Virginia Division.

W. Va. Wesleyan To Graduate First Male Nurse In May

For the first time in the 13-year history of the Department of Nursing, a male will be among the 40 seniors graduating in May from West Virginia Wesleyan College.

He's Charles E. Osborne, a native of Buffalo, New York. He dropped out of Wesleyan in 1964 after two years as a chemistry major, and worked as a lab technician in the Ohio Valley chemical industry until his return to campus.

Why nursing? "Why not," says Osborne. "With the advent of Medicare and other creative health services, it's nice to be in demand when unemployment continues to climb." He speaks too of the personal satisfaction, the shortage of nurses, and the good pay. He has proved his good citizenship as a member of the volunteer Upshur County Emergency Medical Services.

Osborne comes from a family of two brothers, both of whom have master's degrees in engineering; and a sister, with a master's in music. His father, Fred H. Osborne, is a retired Director of Engineering at Wurlitzer Company in Tonawanda, New York. He is married to the former Peggy Webster of Lowell, Ohio, who teaches senior English at Lewis County High School.

Wesleyan's baccalaureate program is one of three accredited in the State and combines classroom lectures, laboratory work, and clinical experience in nursing at hospitals in Buckhannon, Clarksburg and Elkins. Four years of study results in the awarding of a bachelor of science degree. Osborne is considering further study, but at this point is not certain about a field of specialization.

Charles E. Osborne of Buffalo, New York, a nursing student at West Virginia Wesleyan College, will be among the 40 seniors graduating this month. But he won't be wearing a nurses' cap.

In this era, has he found discrimination? "Some," Osborn says, "from older nurses but the younger personnel, reared in an age of civil rights and women's lib, finds nothing unusual in my choice of profession."

One thing for sure, he won't be wearing a nurses' cap.

Dr. Charles A. Hoffman Room Dedicated At MU Library

Dr. Charles A. (Carl) Hoffman of Huntington was honored on April 14 when a room at the James E. Morrow Library at Marshall University was dedicated to him. Approximately 90 area residents, many from the Huntington medical community, turned out to honor the former Marshall student and professor who is a Past President of the American Medical Association (1972-73) and the State Medical Association (1957-58).

C. A. Hoffman, M. D.

Located on the library's third floor, the Dr. Charles A. Hoffman Room will house his papers and medals, particularly those relating to his work with the AMA, State Medical Association and other medical organizations.

Doctor Hoffman, a urologist, attended Marshall and earned a degree in pharmacy at The Ohio State University and his M. D. degree from the Cincinnati College of Medicine and Surgery. He taught pre-med courses at Marshall during 1940-44 and headed the campus health service.

A member of the Marshall Advisory Board, Doctor Hoffman also served as Treasurer of the Marshall Foundation. In 1972, he received an honorary degree from Marshall and in 1969, the Alumni Association's Distinguished Alumnus Award.

"There is no honor greater than being recognized by one's friends and community," said Doctor Hoffman during the dedication ceremonies.

"I see in this room the focal point of a tremendous medical library to come," he continued. "This room is the result of many minds working on a dream which has come true and will expand. I look forward to the time when we will have a top-notch medical school here and a fine medical library."

The room "not only will provide recognition to a man who has served his nation, his profession, his state and his community, but more importantly, it will be a store house of knowledge," said Marshall President Robert B. Hayes.

Other speakers included Dr. Kenneth Slack, Director of the Marshall libraries, and Dr. Robert C. Parlett, Dean of the School of Medicine and Vice President for Health Sciences. Doctor Parlett called the room "a very fitting tribute" which would make available to the students "some of the more tangible" benefits of Doctor Hoffman's accomplishments.

16-Point Program To Be Submitted At AMA Meeting In July

A planning program that calls for major activity in 16 areas by the American Medical Association in 1975 will be submitted to the House of Delegates at the 124th Annual Convention of the AMA, June 14-19, in Atlantic City, New Jersey.

Among the points cited for attention in the proposed plan are possible changes in the organizational structure of the AMA, both internally and as a federation; the need for bolstering resources; the problem of professional liability insurance; the threat of increasing governmental regulation of medicine that interferes with quality care and infringes on the physician's self-determination; and assurance of quality medical care through strengthening the AMA's role in medical education, especially in programs of continuing medical education.

The West Virginia State Medical Association's two Delegates to the AMA House of Delegates are Drs. Richard E. Flood of Weirton and Frank J. Holroyd of Princeton, with Drs. George R. Callender, Jr., of Charleston, and Harry S. Weeks, Jr., of Wheeling, as Alternate Delegates.

The business meeting of the AMA House starts on Sunday, June 15 and is slated to end Thursday, June 19. The hearings of the Reference Committee will begin on Monday, June 16.

The Special Committee of the House of Delegates, which has met several times to receive information concerning the financial affairs of the AMA, tentatively plans to hold an open hearing on Saturday afternoon, June 14, for a discussion of the information which it has received, as well as for consideration of some preliminary conclusions which it may have reached in deliberation up to that point. Final recommendations from the Committee to the House cannot be formally considered until after they have been introduced into the business of the House on Sunday, June 15.

The entire thrust of the 1975 scientific program is on accredited continuing medical education. Category 1 credit toward the AMA's Physician's Recognition Award will be given for almost all programs. The entire program consists of postgraduate courses, general and specific symposia, scientific exhibits, commercial and industrial exhibits, and motion picture symposia on the most relevant subject matter for today's practicing physician.

Full details of the AMA program were published in the April 28 issue of *The Journal of the American Medical Association.*

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

May 1-4—Am. Society of Internal Medicine, Washington, D. C.

May 1-4—North Carolina Med. Society, Pinehurst, N. C.

May 5-8—Am. Coll. of Ob. & Gyn., Boston.

May 11-15—Am. Urological Assn., Miami Beach.

May 11-15—Ohio State Medical Assn., Columbus.

May 18-24—Am. Gastroenterological Assn., San Antonio, Texas.

June 2-4—Am. Neurological Assn., New York City.

June 14-19—AMA Annual Meeting, Atlantic City.

June 21—W. Va. State Society of Anesthesiologists, Morgantown.

June 23-26—Am. Orthopaedic Assn., Hot Springs, Va.

Aug. 8-10—Am. Academy of Clinical Toxicology, Kansas City, Mo.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 21-25—Am. Acad. of Ophth. & Otol., Dallas.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 24-28—Am. Acad. for Cerebral Palsy, New Orleans.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Sept. 30-Oct. 3—Am. Roentgen Ray Society, Atlanta.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

1976

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

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Found useful in the management of vertigo* associated with ;eases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

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IEF SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of ;ciences—National Research Council and/or other information, FDA has classified he indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with notion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the ›estibular system.

Final classification of the less than effective indications requires further nvestigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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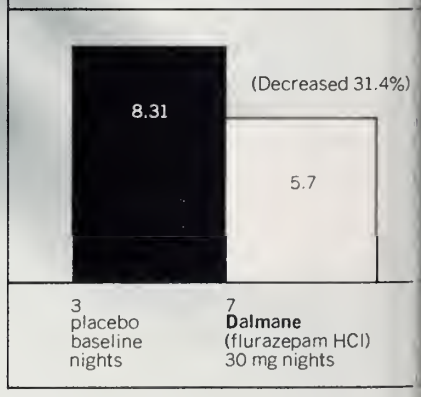
Average Number of Nighttime Awakenings[1-4]
(Four Geographically Separated Sleep Research Laboratory Clinical Studies, 16 Subjects)



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..and is well tolerated. The al adult dosage is 30 mg *h.s.*, with elderly and debilitated ients, limit the initial dose to mg to preclude oversedation, ziness or ataxia. Evaluation of ssible risks is advised before scribing.

ERENCES:

aracan I, Williams RL, Smith JR: The p laboratory in the investigation of sleep sleep disturbances. Scientific exhibit at 124th annual meeting of the American chiatric Association, Washington DC, 3-7, 1971

rost JD Jr: A system for automatically lyzing sleep. Scientific exhibit at the annual Clinical Convention of the erican Medical Association, Boston, 29-Dec 2, 1970; and at the 42nd annual ntific meeting of the Aerospace Medical ociation, Houston, Apr 26-29, 1971

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ore prescribing Dalmane (flurazepam l), please consult complete product rmation, a summary of which follows:

ications: Effective in all types of insomnia racterized by difficulty in falling asleep, quent nocturnal awakenings and/or early rning awakening; in patients with recurring mnia or poor sleeping habits; and in te or chronic medical situations requiring tful sleep. Since insomnia is often transient l intermittent, prolonged administration is erally not necessary or recommended.

ntraindications: Known hypersensitivity lurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

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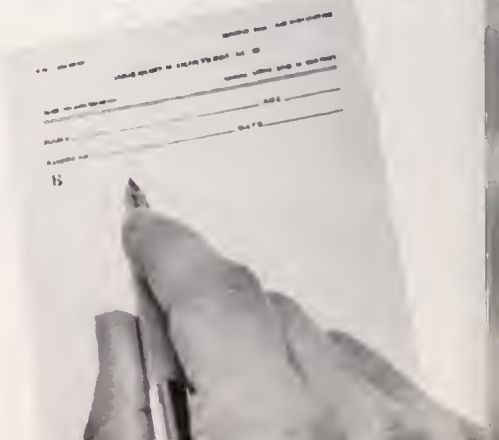

he weight of scientific opinion:

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Definitely not, unless bio- ivalence tests and other quality rance checks had been conducted. e pharmaceutical industry and ny scientists have maintained this ition for years, but others have stioned it. Now the Office of hnology Assessment of the ngress of the United States has orted on the issue in its Drug equivalence Study.*

Here are a few definitive state- nts in the O.T.A. report:

"...the problem of bioinequiva- cy in chemically equivalent prod- s is a real one. Since the studies in ich lack of bioequivalence was nonstrated involved marketed ducts that met current compen- l standards, these documented in- nces constitute unequivocal dence that neither the present ndards for testing the finished duct nor the specifications for terials, manufacturing process, l controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.

"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

rotecting the ntegrity of our prescription

WVU Medical Center
—News—

SURVIVAL often depends on being at the right place at the right time.

To ill newborn infants that place must be one which provides the support they need—warmth and the respirator to maintain their labored breathing, sophisticated equipment to monitor their vital signs and the trained personnel to give them intensive care.

The right time may be a matter of a day, an hour or even less.

A new program at West Virginia University Hospital, under the direction of the Department of Pediatrics and in cooperation with the State Department of Health, is designed to use that time it takes to get to the right place.

Known as Neonatal Transport, the system provides supportive care to infants while they are being moved to University Hospital for intensive care. It utilizes both air and surface ambulances.

Now primarily serving counties in northern West Virginia and surrounding states, the program could serve as a pilot for proposed facilities in the eastern and southern parts of the state. Central West Virginia is now covered by a program at the Charleston Area Medical Center (CAMC).

Headed By Doctor Neal

Heading the University Hospital program is Dr. William A. Neal. A Huntington native and a 1966 graduate of the WVU School of Medicine, Doctor Neal is a specialist in pediatric cardiology. He is an Assistant Professor of Pediatrics and is in charge of newborn intensive care at University Hospital.

He returned to WVU from the University of Minnesota, where he served his residency and was a medical Fellow in pediatric cardiology and an instructor in the Department of Pediatrics.

The Neonatal Transport is activated upon request of a referring physician or hospital in the covered area.

Staffed by a physician and support personnel and equipped with a portable battery-powered incubator known as an isolette, and an emergency supplies kit stocked for all medical contingencies, the team is usually ready to leave University Hospital within 15 minutes after the call.

"The program was started as part of an attempt to reduce the unacceptably high infant mortality rate in West Virginia," said Doctor Neal.

According to the latest available statistics, West Virginia stands 37th among the 50 states (scaled from the lowest to the highest death rate) with 19 deaths per 1,000 live births. The national average is 17.7. Despite wealth, scientific achievement and technology, the United States is surpassed by 14 other countries of the world who have lower infant mortality rates.

- **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

Reduces Infant Deaths

"The Neonatal Transport system has been used for several years in parts of Europe and in sections of the United States," said Doctor Neal. "It has demonstrated in other areas that it can significantly reduce infant illness and death."

Although named the Neonatal Transport, the service is available to move any sick infant from birth up to one year of age.

Conditions necessitating intensive care for infant survival might include prematurity, hyaline membrane disease, cardiac failure, congenital heart disease, birth defects requiring immediate surgery, or any of several other diseases of infancy.

"This is not a free service," Doctor Neal said, "but we are trying to gain support and donations which will aid us to equip and maintain the program and defray the costs."

Doctor Neal envisions a state-wide network of regional hospitals equipped to care for the critically ill infant.

Presently University Hospital and the CAMC are the only referral centers in West Virginia providing intensive car for the newborn.

"Plans are under way to establish intermediate care nurseries in various larger communities in West Virginia," Doctor Neal added.

"Development of this system requires specialized newborn nurseries with expensive equipment and nurses and physicians trained in intensive care techniques."

Twenty Infants Served

From February 1, when the service started, to April 7, 20 infants have been brought to the Intensive Care Unit at University Hospital by the Neonatal Transport service. All but two have survived.

One of the first was a two-day-old premature infant with hyaline membrane disease. The tiny boy was transported by surface ambulance from the Clarksburg United Hospital Center. Requiring respirator support for several days, he was at University Hospital for about a week. He is now back in Clarksburg doing well.

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The Month in Washington

• From the Washington Office of the American Medical Association.

MARCH saw the American Medical Association testify a number of times before numerous Congressional committees on a number of bills, including professional liability, extension of health insurance to the unemployed, comprehensive elementary and secondary school health education, and air pollution.

The House Ways and Means Subcommittee on Health began hearings in consideration of legislation for sweeping studies of the medical professional liability problem. The measure, sponsored by Subcommittee Chairman Dan Rostenkowski (D-Ill.) authorizes a study by the Office of Technology Assessment in conjunction with the National Academy of Sciences.

Under the proposal, one study would be completed within 90 days and consider interim arrangements for solution of problems relating specifically to Medicare and liability. The second study, with a 10-month schedule, would review the entire area of professional liability compensation.

In testimony before the Subcommittee, Malcolm Todd, M. D., AMA President, urged that remedial activity be undertaken at the state level.

Doctor Todd told the Subcommittee that personal injury lawsuits are determined under the state rules of law. He noted that the U. S. Constitution requires this procedure, "and as a consequence, each state can determine its own destiny and provide a wealth of experience—favorable or unfavorable—to its neighbors. Accordingly, the AMA is cooperating with our federated state societies in actively fostering discussion of professional liability law at the state level throughout America. We recognize that each state has its unique cultural, industrial and social composition, and, accordingly, we expect to see a diverse response to the suggestions which we advance. However, we also expect to reap a rich experience by working within the system of American Federalism."

The AMA President said the federal government can be of assistance, but the ultimate responsibility is upon the states. "No one, least of all I suspect, within this Congress, wishes to see this situation deteriorate to such an extent that the federal government is required to intervene."

Dr. Todd urged specific language for the Professional Standards Review Organization program to avoid interpretation of the law as providing federal minimum standards of care. This would drastically increase defensive medicine, he warned.

Health Insurance for the Unemployed

With respect to health insurance for the unemployed, Russell B. Roth, M. D., AMA's Immediate Past President, testified before the Rostenkowski subcommittee, that the current recession and inflation "have challenged the continued enjoyment of a way of life which we as a society so shortly ago assumed to be invulnerable."

The medical profession, Doctor Roth said, is committed to the goal of "reducing the human suffering increasingly prevalent throughout society."

The plight of the unemployed calls for fast remedial action "to devise a method under which health coverage is continued for the unemployed individual and his family and to afford such protection without disruption to the health delivery system." Doctor Roth advocated a temporary program which would, during the period of unemployment, continue the worker's insurance coverage for himself and his family. Such a program should be built upon the existing unemployment compensation system, one which affords a ready mechanism for implementation of a temporary program, according to Doctor Roth.

While the program would be funded from the general revenues of the federal government, premiums would be paid on the basis of certification of entitlement by state unemployment compensation agencies, he said.

A simple extension to the unemployed of Medicare Part A insurance coverage under the Medicare program would restrict the benefits to hospital care and any proposal which would condition the payment for services upon a hospital admission could only be expected to increase pressure for utilization of expensive care facilities and further aggravate inflationary costs, according to Doctor Roth.

"Moreover," Doctor Roth said, "the administration of a temporary health insurance program through the enlistment of the Medicare bureaucracy would place an immediate and intolerable burden upon an already strained bureaucracy."

The AMA presented similar testimony to the Senate Health Subcommittee headed by Senator Edward Kennedy (D-Mass.) which is holding hearings on the same subject.

"For when was honey ever made with one bee in the hive"...

Thomas Hood, *The Last Man*

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Obituaries

WILSON F. SMITH, M. D.

Dr. Wilson P. Smith, a Huntington family physician, died on March 9 in a Huntington hospital. He was 60. Doctor Smith was a member of the staff of St. Mary's Hospital in Huntington and the Huntington Hospital, and was a Past President of the staff at Cabell-Huntington Hospital.

A native of Proctorville, Ohio, Doctor Smith graduated from Ohio State University and received his M. D. degree in 1942 from that institution's College of Medicine.

Doctor Smith was a member of the Cabell County Medical Society, the West Virginia State Medical Association, the American Medical Association, and the American Academy of Family Physicians. He was a Past Secretary of the Cabell County Medical Society and a Past President of the Novel Carter Medical Society.

Survivors include the widow; a daughter, Miss Mina E. Smith, a junior at the University of Kentucky; three sons, Wilson P. Smith, Jr., a third-year medical student at the West Virginia University School of Medicine; Stephen C. Smith, a senior at Virginia Polytechnic Institute, and Edward Smith, at home; a sister, Mrs. John D. Dailey of Huntington; and one brother, H. Julian Smith of Hallandale, Florida.

* * *

BEDFORD F. PUCKETT, M. D.

Dr. Bedford F. Puckett, an Oak Hill family physician, died at his home there on March 19. He was 79. Doctor Puckett, a Past President of the Fayette County Medical Society, was a native of Annona, Texas.

Doctor Puckett graduated from Wesley Commerce Junior College and received his M. D. degree in 1921 from the Tulane University School of Medicine. Upon graduation he came to West Virginia, where he interned at Beckley Hospital. He later was staff surgeon at Oak Hill Hospital before establishing private practice in Oak Hill in 1924. He retired in January, 1972.

In 1971, Doctor Puckett was named Oak Hill's Citizen of the Year and saluted during the Fourth Annual West Virginia Sports Festival by its dedication to him. He was a veteran of World War I.

Doctor Puckett was a member of the Fayette County Medical Society, the West Virginia State Medical Association, and the American Academy of Family Physicians.

Survivors include the widow; a daughter, Mrs. Jean Lantz of Memphis, Tennessee; three sisters, Miss Frankie and Miss Bell Puckett of Annona, and Mrs. Mildred Barnard, Celeste, Texas; and two brothers, Howard Puckett, DeKalb, Texas; and Oma Puckett, Annona.

(Obituaries Continued on Page xiv)

PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

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(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

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Please see prescribing information on facing page

OBITUARIES (Continued From Page xii)

BONG SOOK K. LEE, M. D.

Dr. Bong Sook K. Lee of South Charleston died in a Charleston hospital on March 7 from injuries suffered in an automobile accident near Charleston earlier that day. She was 36. A native of Ichon, Korea, Doctor Lee was a pathologist at the General Division of the Charleston Area Medical Center.

Doctor Lee had been a resident of South Charleston for five-and-one-half years and had previously held a position in the Department of Pathology at Thomas Memorial Hospital in South Charleston.

She graduated from Soo Do Medical College in Seoul, Korea and received her M. D. degree in 1962 from that institution. She interned at Flower Hospital in Toledo, Ohio and served a residency at the Columbus (Ohio) Childrens Hospital and the Ohio State University Hospital.

Doctor Lee was a Diplomate of the American Board of Pathology and was a member of the Kanawha Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the husband, Dr. Kiu Hee Lee, a chemist at the Union Carbide Technical Center in South Charleston; a son and two daughters, Peter, Catherine and Sandra Lee, all at home; the mother, Mrs. Jung Lee Kim of Korea; and two sisters, Mrs. Bong Ryun Kim of Columbus, Indiana and Miss Bong Ok Kim of Korea.

* * *

RICHARD W. McGAN, M. D.

Dr. Richard W. McGan of Princeton died on March 8 after his vehicle plunged into the Guyandotte River near Brenton in Wyoming County. His body was discovered in the water three days later approximately a mile downstream from where the accident occurred. He was 29.

A family physician for the Gary Medical Service, Doctor McGan had been on a fishing trip. He was traveling alone. A native of Asco (McDowell County), he was graduated from Marshall University and received his M. D. degree in 1971 from the West Virginia University School of Medicine. He interned at Washington (Pennsylvania) Hospital and practiced at Ashland, Kentucky for one year before going to Princeton in March of 1973. He joined the Gary Medical Center last August.

Doctor McGan was a member of the Mercer County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; one son, Sean William McGan, at home; one daughter, Eve Allison McGan, at home; and one sister, Mrs. Nancy Lynn Green of Davy.

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Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

Soft Water An Added Factor In Heart Attack, Stroke

Drinking soft water can now be added to the list of factors contributing to heart attack and stroke, says the author of a recent study on the subject.

Just how soft water works in the body to add to the risk of stroke and heart attack is not clear. But statistics comparing death rates in large geographical regions show that the rates from heart attack and stroke are higher in soft water areas than in regions where people drink hard water or water with a substantial load of mineral salts, according to Dr. Andrew G. Shaper, a British medical scientist.

It would be premature to suggest that all soft water should be hardened, says Doctor Shaper, although it might be reasonable to caution those with hard-water supplies who wish to soften their water. "In particular, those in hard-water areas who do soften their water supplies might regard it judicious to leave one tap still producing hard water for drinking."

Although soft water's effect on the circulatory system is not clear, Doctor Shaper suggests that two factors may be involved: (1) high blood pressure is more prevalent in soft-water areas, and (2) there is some factor that affects the heart muscle directly.

Drinking hard water will by no means assure prevention of stroke or heart attack. Soft water is added to the traditional risk factors—high cholesterol in the blood, smoking cigarettes, obesity, lack of exercise and high blood pressure.

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County Societies

CABELL

The Cabell County Medical Society met on March 13 at the French Tavern Restaurant in Huntington. The guest speaker was Dr. Robert B. Hayes, President of Marshall University. Doctor Hayes discussed the recent past history and the future of the university. His talk was followed by a question-and-answer period.

The Society endorsed the 1975 arthritis campaign and the arthritis clinic to be set up at St. Mary's Hospital in Huntington.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on March 17 at the Dinner Bell Restaurant in Princeton. The scientific program was presented by Dr. Steven Lowder of the Department of Medicine, Bowman Gray School of Medicine of Wake Forest College. Doctor Lowder outlined the physiology of the thyroid and interreaction of the pituitary and hypothalamus as well as body tissue.

A report from the Executive Committee meeting on malpractice was read by Dr. John J. Mahood and approved by the Society.

Doctor Frank J. Holroyd gave the report of the Legislative Committee.

A donation to Camp Kno Koma was approved.—John J. Mahood, M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on March 4 at the Old Mill Club in Morgantown. Guest speakers for the evening were Mr. Douglas LaFaucie and Mr. Peter A. Laquer of the West Virginia Regional Medical Program. They spoke on the organization of the RMP and what is being done to improve the emergency medical service in our area.

There were 61 members and guests present.—H. Summers Harrison, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on March 12 at Stevens Clinic Hospital in Welch. Following a review of correspondence received, two medical films were shown.

The first film dealt with the surgical treatment of coronary atherosclerosis, showing the indications for selective scenic coronary arteriography. The second film, "More Than Just Old Age," presented the importance of distinguishing physiological from pathological aging. Self-examination books were presented with both films.—Zenaida Miranda, M. D., Acting Secretary.

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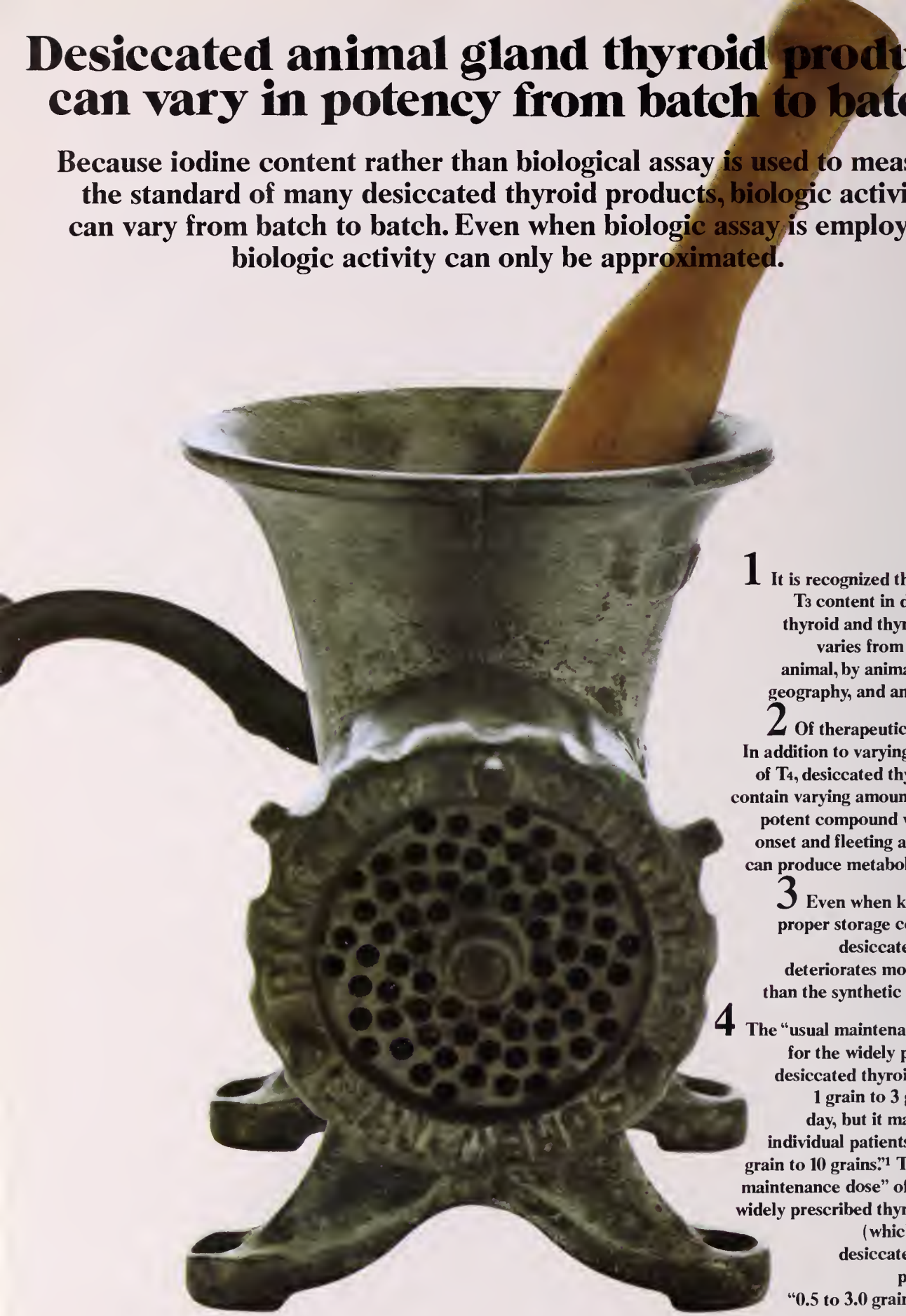

1 It is recognized that T_4 and T_3 content in desiccated thyroid and thyroglobulin varies from animal to animal, by animal species, geography, and animal diet.

2 Of therapeutic concern: In addition to varying amounts of T_4, desiccated thyroid may contain varying amounts of T_3, a potent compound with rapid onset and fleeting action that can produce metabolic surges.

3 Even when kept under proper storage conditions, desiccated thyroid deteriorates more rapidly than the synthetic hormone.

4 The "usual maintenance dose" for the widely prescribed desiccated thyroid is "from 1 grain to 3 grains per day, but it may vary, in individual patients from 1/2 grain to 10 grains."[1] The "usual maintenance dose" of the most widely prescribed thyroglobulin (which is also a desiccated thyroid product) is "0.5 to 3.0 grains daily."[2]

1. Armour Thyroid (Tablets). 1975 Physicians' Desk Reference. p. 561.
2. Proloid® (thyroglobulin). 1975 Physicians' Desk Reference. p. 1575.

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1 Sodium levothyroxine is *not derived* from any animal gland source. It is a synthetic and, since sodium levothyroxine is the only active ingredient, its weight is the sole determinate of potency.

2 SYNTHROID (sodium levothyroxine) is T_4 which is converted by the patient to T_3 at the cellular level, thereby providing a physiologic source and amount of T_3 to meet metabolic needs for complete thyroid replacement therapy. Because the onset of effect is slower and more steady, the possibility of sudden metabolic surges is reduced with SYNTHROID therapy.

3 SYNTHROID (sodium levothyroxine) products have a longer and more reliable shelf life than Thyroid U.S.P. when kept under the same proper storage conditions. There is no animal protein present in SYNTHROID products.

4 A recent study of 44 patients with hypothyroidism indicates that 89 percent of the patients were maintained with doses of L-thyroxine (SYNTHROID) between 100 mcg. and 200 mcg. (0.1 mg. and 0.2 mg.) per day.[3]

3. Stock, J.M., Surks, M.I., and Oppenheimer, J.H.: Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. *290*:529-33, 1974.

Eliminates many of the uncertainties of desiccated thyroid therapy.

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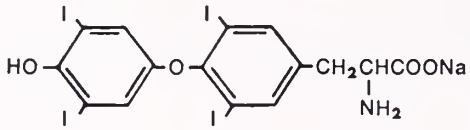
Description
SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine). L-thyroxine is the principal hormone secreted by the normal thyroid gland.



Sodium Levothyroxine

Actions
SYNTHROID (sodium levothyroxine) **Tablets,** taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications
SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications
There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings
Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions
Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions
Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration
For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occurs and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How supplied
SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—violet . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green. Depending on strength, these tablets are available in bottles of 100, 500, 1000 and 5000.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution
Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

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S. L. Bembalkar, M. D.
L. H. Subbaraya, M. D.

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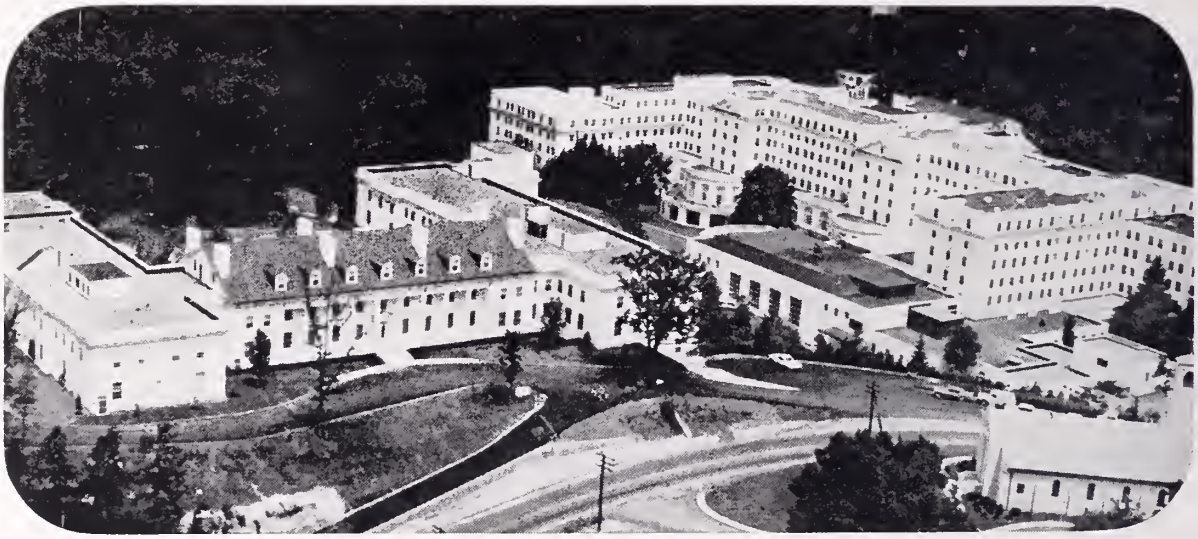

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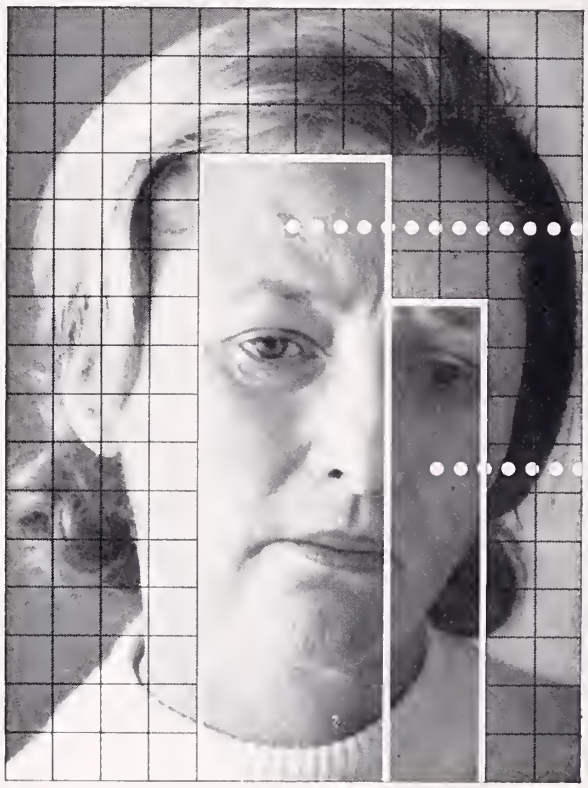

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For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

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e, weigh potential benefit
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harmacology of agents em-
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ntidepressants may potentiate
Usual precautions indicated in
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, or with suicidal tendencies.

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JUNE
1975

Vol. 71 No. 6

The
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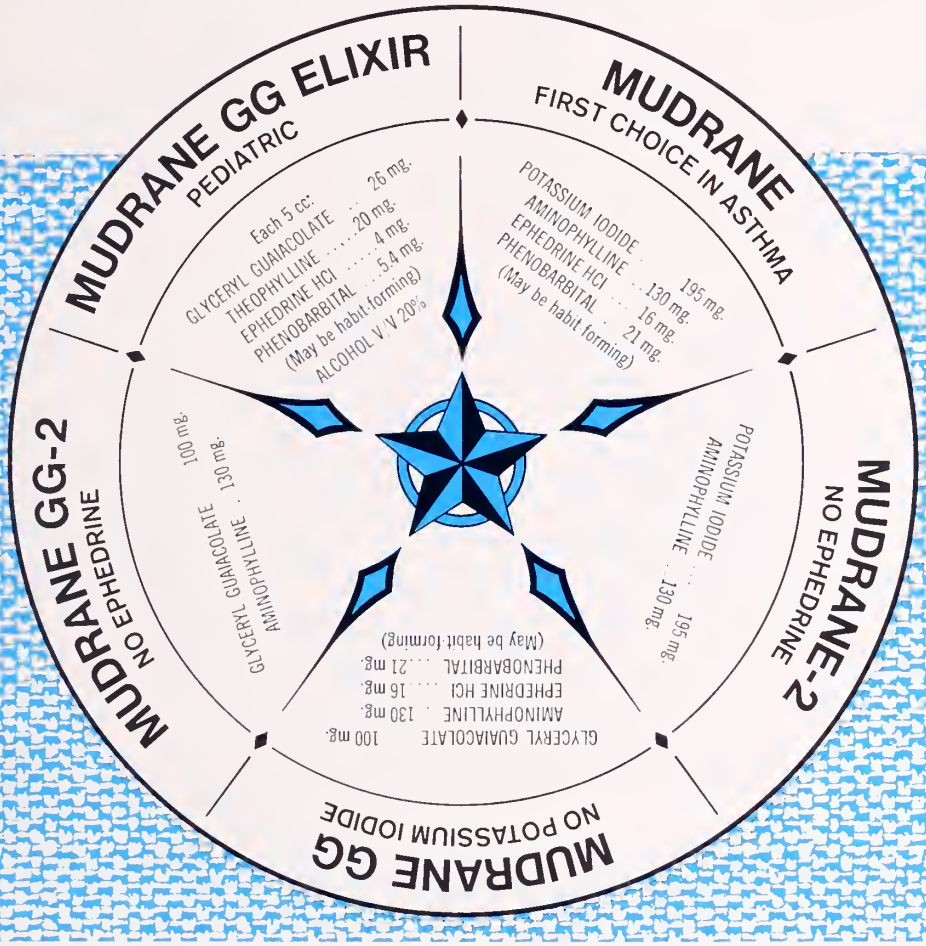

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Bioequivalenc

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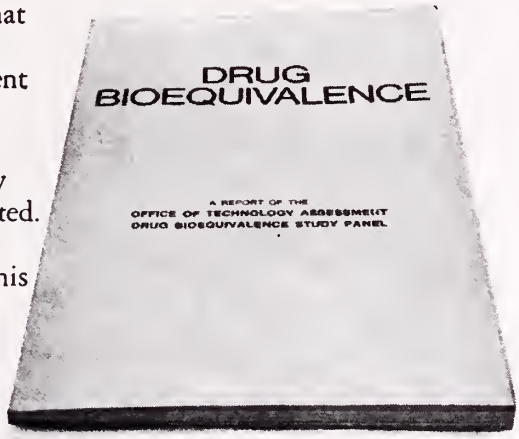
Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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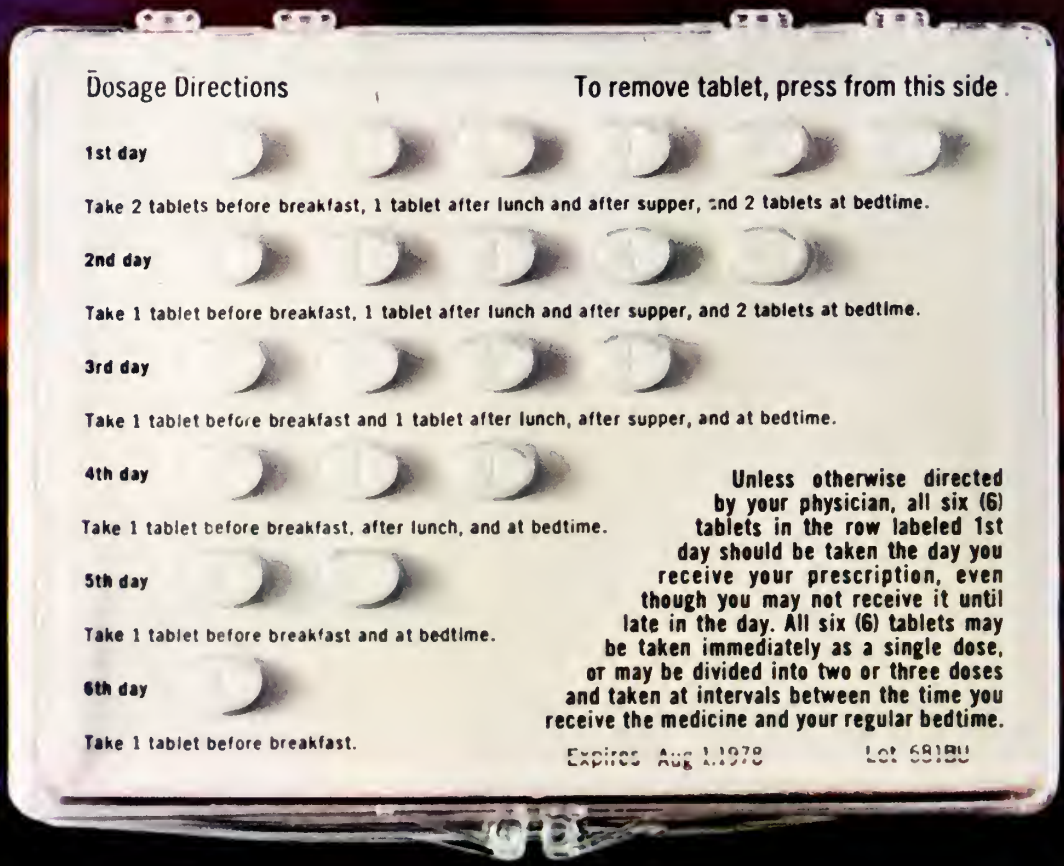

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.

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Medrol Dosepak is designed to provide a tapered, six-day course of methylprednisolone tablets.

On occasion, a six-day course of Medrol therapy may not be sufficient and therapy may need to be extended. If there is continued contact with the sensitizing agent, corticosteroids will not completely suppress the inflammatory response. A further caution: If lesions become infected during Medrol therapy, it should be remembered that steroids may decrease resistance to infection and hinder the body's ability to localize an infection.

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DESCRIPTION AND ACTIONS: Medrol (methylprednisolone) is a synthetic glucocorticoid with potent anti-inflammatory effects. It is readily absorbed from the GI tract. Glucocorticoids cause profound and varied metabolic effects and modify the body's immune responses to diverse stimuli.

INDICATIONS: 1. **Endocrine Disorders:** Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the first choice; synthetic analogs may be used in conjunction with mineralocorticoids where applicable; in infancy, mineralocorticoid supplementation is of particular importance). Congenital adrenal hyperplasia, nonsuppurative thyroiditis, hypercalcemia associated with cancer. 2. **Rheumatic Disorders:** As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in: psoriatic arthritis, rheumatoid arthritis (selected cases may require low-dose maintenance therapy), ankylosing spondylitis; acute and subacute bursitis, acute nonspecific tenosynovitis, acute gouty arthritis. 3. **Collagen Diseases:** During an exacerbation or as maintenance therapy in selected cases of—Systemic lupus erythematosus, acute rheumatic carditis. 4. **Dermatologic Diseases:** Pemphigus, bullous dermatitis herpetiformis, severe erythema multiforme (Stevens-Johnson syndrome), exfoliative dermatitis, mycosis fungoides; severe psoriasis. 5. **Allergic States:** Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment: Seasonal or perennial allergic rhinitis, bronchial asthma, contact dermatitis, atopic dermatitis; serum sickness. 6. **Ophthalmic Diseases:** Severe acute and chronic allergic and inflammatory processes involving the eye and its adnexa such as—allergic corneal marginal ulcers, herpes zoster ophthalmicus, anterior segment inflammation, diffuse posterior uveitis and choroiditis, sympathetic ophthalmia, allergic conjunctivitis, keratitis, chorioretinitis; optic neuritis, iritis and iridocyclitis. 7. **Respiratory Diseases:** Symptomatic sarcoidosis, Loeffler's syndrome not manageable by other means, berylliosis; fulminating or disseminated pulmonary tuberculosis when concurrently accompanied by appropriate antituberculous chemotherapy. 8. **Hematologic Disorders:** Idiopathic and secondary thrombocytopenia in adults, acquired (autoimmune) hemolytic anemia, erythroblastopenia (RBC anemia), congenital (erythroid) hyperplastic anemia. 9. **Neoplastic Diseases:** For palliative management of leukemias and lymphomas in adults, acute leukemia of childhood. 10. **Edematous States:** To induce a diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus. 11. **Miscellaneous:** Tuberculous meningitis with subarachnoid block or impending block when concurrently accompanied by appropriate antituberculous chemotherapy. Systemic dermatomyositis (polymyositis).

CONTRAINDICATIONS: Systemic fungal infections.

WARNINGS: In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during, and after the stressful situation is indicated.

Corticosteroids may mask some signs of infection and new infections may appear during their use. There may also be decreased resistance and inability to localize infection. Prolonged use may enhance the establishment of secondary ocular infections due to fungi or viruses.

Since adequate human reproductive studies have not been done, the use in pregnancy, nursing mothers or women of childbearing potential requires that the possible benefits be weighed against the potential hazards to the mother and the embryo or fetus. Infants should be observed for signs of hypoadrenalism.

Average and large doses of hydrocortisone or cortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium. These effects are less likely to occur with the synthetic derivatives except when used in large doses. Dietary salt restriction and potassium supplementation may be necessary. All corticosteroids increase calcium excretion.

While on corticosteroid therapy, patients should not be vaccinated against smallpox. Other immunization procedures should not be undertaken in patients who are on corticosteroids, especially on high dose, because of possible hazards of neurological complications and a lack of antibody response.

The use of corticosteroids in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with an appropriate antituberculous regimen.

If corticosteroids are indicated in patients with latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur. During prolonged corticosteroid therapy, these patients should receive chemoprophylaxis.

PRECAUTIONS: Hormone therapy is an adjunct to, and not a replacement for, conventional therapy.

Dosage should be individualized according to the severity of the disease and the response of the patient. As soon as a satisfactory clinical response is obtained, the daily dose should be reduced, either to termination of treatment or to the minimal effective maintenance dose level. The lowest possible dose should be used and when reduction in dosage is possible, the reduction should be gradual if the drug has been administered for more than a few days. If a period of spontaneous remission occurs in a chronic condition, treatment should be discontinued.

Drug-induced secondary adrenocortical insufficiency may be minimized by gradual reduction of dosage. This type of relative insufficiency may persist for months after discontinuation of therapy; therefore, in any situation of stress occurring during that period, hormone therapy should be reinstituted. Since mineralocorticoid secretion may be impaired, salt and/or a mineralocorticoid should be administered concurrently.

There is an enhanced effect of corticosteroids on patients with hypothyroidism and in those with cirrhosis.

Corticosteroids should be used cautiously in patients with ocular herpes simplex because of possible corneal perforation.

Psychic derangements may appear or existing emotional instability or psychotic tendencies may be aggravated by corticosteroids.

Aspirin should be used cautiously in conjunction with corticosteroids in hypoprothrombinemia.

Steroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess or other pyogenic infection, diverticulitis, fresh intestinal anastomoses; active or latent peptic ulcer, renal insufficiency, hypertension, osteoporosis; and myasthenia gravis.

Growth and development of infants and children on prolonged corticosteroid therapy should be carefully observed.

Blood pressure, body weight, routine laboratory studies, including 2-hour postprandial blood glucose and serum potassium, and a chest X-ray should be obtained at regular intervals during prolonged therapy. Upper GI X-rays are desirable in patients with known or suspected peptic ulcer disease.

ADVERSE REACTIONS. Fluid and Electrolyte Disturbances. Sodium retention, fluid retention, congestive heart failure in susceptible patients, potassium loss; hypokalemic alkalosis, hypertension. **Musculoskeletal.** Muscle weakness; steroid myopathy, loss of muscle mass, osteoporosis, vertebral compression fractures, aseptic necrosis of femoral and humeral heads; pathologic fracture of long bones. **Gastrointestinal.** Peptic ulcer with possible perforation and hemorrhage; pancreatitis, abdominal distention, ulcerative esophagitis. **Dermatologic.** Impaired wound healing, thin fragile skin, petechiae and ecchymoses, facial erythema, increased sweating. May suppress reactions to skin tests. **Neurological.** Increased intracranial pressure with papilledema (pseudotumor cerebri) usually after treatment. Convulsions, vertigo; headache. **Endocrine.** Development of Cushingoid state, suppression of growth in children; secondary adrenocortical and pituitary unresponsiveness, particularly in times of stress, as in trauma, surgery or illness, menstrual irregularities, decreased carbohydrate tolerance, manifestations of latent diabetes mellitus, increased requirements for insulin or oral hypoglycemic agents in diabetics. **Ophthalmic.** Posterior subcapsular cataracts, increased intraocular pressure, glaucoma, exophthalmos. **Metabolic.** Negative nitrogen balance due to protein catabolism.

DOSAGE AND ADMINISTRATION: The initial dosage may vary from 4 to 48 mg per day. **Requirements are variable and must be individualized on the basis of the disease under treatment and the response of the patient.** The proper maintenance dosage should be determined by decreasing the initial dosage in small decrements at appropriate time intervals until the lowest dosage which will maintain an adequate clinical response is reached. If after long-term therapy the drug is to be stopped, it is recommended that it be withdrawn gradually rather than abruptly.

ALTERNATE-DAY THERAPY (ADT): ADT is a corticosteroid dosing regimen in which twice the usual daily dose of corticoid is administered every other morning. The purpose of this mode of therapy is to provide the patient requiring long-term pharmacologic dose treatment with the beneficial effects of corticoids while minimizing certain undesirable effects including pituitary-adrenal suppression, the Cushingoid state, corticoid withdrawal symptoms, and growth suppression in children.

Medrol (methylprednisolone) or other short-acting (producing adrenocortical suppression for 1¼ to 1½ days following a single dose) corticoids are recommended for ADT. Complete control of symptoms will not be possible in all patients. When considering this mode of therapy, keep in mind the basic principles and indications for corticosteroid therapy. The benefits of ADT should not encourage the indiscriminate use of steroids.

SUPPLIED: **2 mg**—in bottles of 30 and 100 scored tablets; **4 mg**—in bottles of 30, 100 and 500 scored tablets and in 21 scored tablet Dosepak™; **16 mg**—in bottles of 50 scored tablets and in 14 scored tablet ADT Pak® (formerly Alternate Daypak®).

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The West Virginia Medical Journal

Vol. 71, No. 6 June, 1975

Radiation Therapy In The Treatment Of Invasive Carcinoma Of The Cervix Uteri And The Morbidity

P. R. Reddi, M. D.

The radiation therapy management consisted of external irradiation with Megavoltage using four pelvic ports, an anterior and posterior port and two lateral ports: the so-called "box technique." All the dose calculations and planning of isodose plots were done individually for each patient with the aid of a computer. On the day following the completion of the course of radiation therapy, a single radium insertion with a Fletcher-Suit apparatus was done. In case of para-aortic node involvement, the treatment was directed to this area in relation to the pelvis with the two parallel opposing ports. A gap ranging from 2.5 to 3.5 centimeters was given at the surface of the skin, depending upon the (a) portal size, (b) source skin distance and (c) anterior posterior thickness of the patient.

The following work-up was done routinely to evaluate the extent of the disease:

Radiological examination: chest x-ray, bone survey, urogram, lymphangiogram, upper and lower GI series.

Nuclear Medicine examination: liver scan and bone scan.

Laboratory examination: CBC, BUN, electrolytes, total proteins, uricacid, serum creatinine, electrophoresis and blood sugar.

Clinical examination: EUA, cystoscopy, proctoscopy and, lastly, biopsy.

Of a total of 71 patients with the invasive carcinoma of the cervix uteri seen at the West Virginia University Medical Center, Division of Radiation Oncology, between 1970-1972, 67 were available for our study. The remaining four patients were excluded because of one of the following reasons: (a) declined recommended therapy, preferring to have treatment done nearer to their residence, (b) refused to have therapy, (c) too advanced disease, or (d) too sick to have therapy.

The Author

- **P. R. Reddi, M. D., Acting Chief, Division of Radiation Oncology, Department of Radiology, West Virginia University Medical Center, Morgantown.**

International obstetrics-gynecology staging was done as illustrated in Table 1. Stage V includes the patients diagnosed earlier but who came with local recurrence to our institution for the first time.

Table 1

Total Number of Patients With The Stage Of The Disease

Stage	*Total Number Patients*	*Radiotherapy Patients*	*Surgery and Radiotherapy Patients*	*Surgery Patients*
I	21	13	5	3
II	20	14	6	0
III	15	13	2	0
IV	5	3	1	1
V	6	1	4	1
	67	44	18	5

The purpose of this study is to review our method of treatment, which was started in 1970, in the terms of morbidity with the rest of the world. The degree of morbidity is divided into four grades for the convenience of comparison:

Grade I

(Radiation reaction during therapy)

Mild symptoms accompanied by only minimal signs have been considered reactions rather than complications; such as anorexia, nausea, vomiting,

diarrhea, dysuria, vulval and vaginal pruritis, fever and lassitude.

Grade II

Moderately severe objective changes such as areas of necrosis, atrophy of the vagina, ulcers or moderate stenosis, telangiectasia of the bladder, hydronephrosis, mild distention of the small or large bowel. Difficulty with bowel movements requiring steroid suppositories or enemas. Chronic proctitis with occasional bleeding and mild hematuria.

Grade III

(1) Bladder—hematuria and urinary fistulas.

(2) Rectum—rectal bleeding, severe complications requiring surgical intervention such as small bowel obstruction and large bowel stenosis.

(3) Vaginal vault necrosis.

Grade IV

(1) Rectal fistulas.

(2) Pulmonary embolism.

(3) Osteomyelitis of the pelvic bones.

Material

Sixty-two patients were treated by external irradiation, 18 of them had post-operative irradiation, and the remaining five had extensive surgery. Immediate radiation therapy was not indicated; instead, we have agreed to follow them up in our department. The type of surgery varied from simple hysterectomy to the extended radical hysterectomy with nodal dissection. The range of tumor doses are tabulated in Table 2 against the number of patients treated. Fourteen of 44

Table 2

Range of Tumor Doses

Tumor Dose			Number of Patients
External		*Radium Point A*	
5000	+	3000	14
5500 to 5600	+	2400 to 2500	18
6000 or more	+	2000	12
			44

radiation therapy patients had 5000 rads external dose. Eighteen had a tumor dose between 5500 and 5600 rads, and the remaining 12 patients had 6000 rads or more. Thirty-five of 44 patients, i.e., 80 per cent (Table 3), had a Grade I complication during therapy. Thirteen of these 35 had dysuria and frequency of micturition, although it was not severe enough to interrupt treatment. Four of the 13 patients developed Grade II complications at a later date. The central structure of the bladder received an average dose of 6000 to 6500 rads.

Table 3

Radiation Therapy Complications Related to Tumor Dose

Tumor Dose	*Number of Patients*	*Grade I Reaction During Treatment*	*Grade II*	*Grade III*
5000 + Ra.	14	8 57%	2 14%	0
5,500 to 5,600 + Ra.	18	15 83.5%	7 39%	0
6,000 or more + Ra.	12	12 100%	3 25%	3 25%
Total	44	35 80%	12 27.5%	3 6.8%

Diarrhea occurred in 31 of 35 patients. In most of the cases the onset was between the fourth and fifth week. Interruption of therapy on this account was necessary on three occasions; it varied from two days to one week. In almost all the cases, symptoms were loose stools with abdominal cramps and pain, especially during the last week of treatment. The diarrhea was satisfactorily controlled by Lomotil, but in some instances, Codeine was added. Ten of the 31 patients developed late sequelae such as chronic changes in the sigmoid colon with narrowing of the lumen, chronic constipation, rectal bleeding and intestinal obstruction. Other complications such as fever, nausea, vomiting, vaginal and vulval pruritis during the therapy were seen in six patients. Two of these six patients developing vaginal and vulval pruritis were treated with 360° rotation because of their unusually large girth. Both were satisfactorily managed with vaginal douches and Hydrocortisone cream. The remaining four were treated with the usual box technique. Two of these six patients developed complete vaginal stenosis with a hard fixed fibrotic area. Later work-up did not reveal recurrent tumor. The reaction of the skin was minimal. In most cases there were no perceptible skin changes. In some cases there was a reaction in the groins during the latter part of the treatment, especially when the lower part of the vagina was included in the treatment volume, but no later skin changes have occurred to date.

Similarly, the patients treated with the post-operative radiation therapy and their complications during and after therapy are shown in Table 4. Eight of 15 patients had urinary complications during therapy. One of them later developed late sequelae, whereas 13 of the 15 patients had gastrointestinal complications dur-

Table 4

Complications Related to Surgery & Radiation Therapy in Relation to the Tumor Dose

Tumor Dose	*Number of Patients*	*Grade I Reaction During Treatment*	*Grade II*	*Grade III*
5,000 to 5,600	6	5	1 + 1 Rt Sur	1 Sur
6,000 rads	8	7	1 + 1 Rt Sur	1 + 1 Rt Sur
More than 6,000 rads	4	3	1 + 1 Rt Sur	0
	18	15 (83.5%)	3 + 3 Rt Sur	1 + 2 Rt Sur
			Rt 4/18 22%	Sur 5/18
Surgery	5	.....		1
Total Surgery	23	.....	.....	6/23 26%

Rt Radiotherapy
Sur Surgery

ing therapy. Three of them developed late complications.

Table 5 shows the incidents of morbidity in relation to the stage of the disease. Grade II and III complications were noted in Stage I: four of the 13 patients; Stage II: seven of 14 patients; Stage III: three of 13 patients; Stage IV: none of three and, lastly, Stage V: one of one. Both the patients receiving 5000 rads tumor dose were treated with Orthovoltage; in the group of 5500 to 5600 rads seven patients have Grade II and III complications, whereas of patients receiving a tumor dose of 6000 rads or more, six have Grade II and III complications.

Table 5

Radiation Therapy Complications Related to Stage of the Disease and the Tumor Dose

Stage	*Number of Patients*	*5000 and Ra.*	*5500 to 5600 and Ra.*	*6000 or more and Ra.*
I	4/13 31%	1/4 25%	2/8 25%	1/1 100%
II	7/14 50%	1/3 33.3%	5/10 50%	1/1 100%
III	3/13 23%	0/6	0/0	3/7 43%
IV	0/3	0/1	0/0	0/2
V	1/1 100%	0/0	0/0	1/1 100%
	15/44 34%	2/4 14.2%	7/18 39%	6/12 50%

Discussion

The figures, of course, are small, but all of our patients were treated under similar conditions including daily fractionation, individual computer planning, Megavoltage equipment, and treatment administered by the same team of technicians but with different external doses. Complications were found to be more common in patients who received an external dose of 5500 rads or more in both groups, i.e., with radiation therapy alone or combined surgery and post-operative radiation therapy. The early radiation reaction during therapy (Table 3), that is a Grade I complication, was increased from 57 per cent to 83.5 per cent when the external dose was raised to 5500 rads, and to 100 per cent when the dose was increased to 6000 rads.

Only two patients (14 per cent) in the 5000 group had Grade II complications as shown in Table 3. Both patients were treated with Orthovoltage with four fields. The morbidity was attributed to the type of equipment being used rather than the dose or technique. In the 5500 to 5600 rads group, 39 per cent had Grade II complications. It is obvious that the morbidity is related to the dose. In the last group, that is 6000 rads and above, 50 per cent had Grade II and III complications. These figures indicate that the intensity of the morbidity increases with the dose. Two of these 44 patients have residual disease and both received an external dose greater than 6000 rads; one of them had Stage III disease with Grade III urinary complications.

One would expect the complications to be directly proportional to the stage of the disease. In the late stages, both advanced disease and a residual tumor will contribute to the complications, but unlike the general concept as shown in Table 5 in our series, 73.5 per cent of the total complications were seen in Stage I and II. Hence, I think, in all of our patients, especially Stage I and II, the dose is the major contributing factor for the complications. The tissues in the pelvis can tolerate 5000 rads without any significant degree of morbidity if it is delivered with proper technique and the dose is just enough to control the microscopic disease in the pelvis. An additional dose of 3000 rads must be added to the Point A with the intracavitary radium. This again will contribute between 800 to 1000 rads to point B at the pelvic brim depending upon the size of the colpostats being used. In the event of positive pelvic lymph node lymphangiogram, however, I would recommend 5600 rads to the whole pelvis plus 2400 rads to the point A

from the intracavitary radium. The calculated dose to the point B ranges between 6100 rads to 6400 rads.

Similarly, in the combined group 83.5 per cent had an early reaction during therapy as shown in Table 4. Six of these 23 patients had Grade II and III surgical complications alone; three of them were urinary fistulas. Of the 18 post-operative radiation therapy patients, four developed late complications. There was no doubt that the surgery did contribute to the morbidity. The late complications were evenly distributed in the different dose groups, but again the degree of morbidity increased with the dose. I believe that a post-surgical patient should have at least 5600 rads to erradicate the local residual disease, but the pelvic tissues, due to the operative procedure and trauma which leaves adhesions, cannot tolerate the dose without significant morbidity. Hence, I think an equivalent dose in a longer treatment period of time, i.e., 6000 rads in 35 treatment days is indicated.

Conclusions

It is interesting to note that only one of the 71 patients had bone involvement; therefore, I think either a bone scan or a bone survey is an adequate test for the elimination of bony metastases before treatment is initiated.

Doses for the Stage I, II, and III-A should be maintained radical, whereas Stage III-B and IV should have a palliative approach depending upon the para-aortic nodal involvement.

All negative lymphangiogram patients should be treated radically for cure; however, all positive lymphangiograms whose general condition is good should have the left supraclavicular node biopsy. If it is negative, we should try to cure these patients with a combination therapy that is pelvic and para-aortic nodal irradiation plus surgery if indicated either before or later as the case may be.

For each individual, careful localization and planning is necessary in full-size printout on the computer or manually hand-drawn with vital organs such as bladder and rectum drawn in the contour. Upper margin of the pelvic port need not extend beyond the sacral promontory. This will eliminate unnecessary irradiation of a large portion of the small bowel.

External beam doses of 5000 rads in five weeks with a four-field technique seem to be well tolerated with no, or minimal, complications for patients with negative lymphangiograms. External beam doses of 5600 rads in five-and-a-half weeks are recommended for patients with positive pelvic lymphangiograms.

Fletcher-Suit apparatus seems to be the best after-loading applicator available at the present time provided the space between the two colpostats is well maintained and the packing is done properly. When packing, one has to be very careful not to push the tandem anteriorly. The tandem and the colpostats should be maintained in the same plane. Proper curvature of the tandem matching to the uterus is selected. The largest possible colpostat should be used to get the maximum benefit of intracavitary irradiation to the parametrium. Localizing x-rays should be taken in the operating room with contrast materials in bladder and rectum so that if the Fletcher-Suit apparatus insertion is not satisfactory, it can be readjusted immediately.

All positive para-aortic lymphangiograms, particularly Stage III-B and IV, should have a biopsy of the left supraclavicular node. This will avoid radical irradiation of the advanced cases.

The initial trend for survival is very encouraging but I believe that two to three years must pass before making a more definite statement. The morbidity, however, is lessened when certain precautions are taken.

A list of references may be obtained by writing The Journal.

Upper Abdominal Mass Associated With Jaundice: A Rare Form Of Pancreatic Pseudocyst Presentation

Mansour Djadalizadeh, M. D.; Albert B. C. Flemming, II; Stephen C. K. Lau, M. D.; and Raymond C. Bonnabeau, Jr., M. D.

PANCREATIC pseudocysts, themselves uncommon lesions, can be distinguished from true cysts of the pancreas by the lack of an endothelial lining. Pseudocysts, while frequently seen in association with pancreatitis, may also be the result of abdominal trauma. This paper reports the rare combination of a pseudocyst of the pancreas and obstructive jaundice.

The Authors

- **Mansour Djadalizadeh, M. D.; Albert B. C. Flemming, II; Stephen C. K. Lau, M. D.; and Raymond C. Bonnabeau, Jr., M. D., from the Departments of Surgery, West Virginia University School of Medicine, Morgantown; and Veterans Administration Hospital, Clarksburg, West Virginia.**

Case Report

A 37-year-old white male was admitted to the Veterans Administration Hospital, Clarksburg, West Virginia, with a three-week history of midepigastric and left upper quadrant pain, together with a ten-day history of jaundice and fever. He had noticed a 30-pound weight loss over the prior three-month period.

On physical examination, a tender liver edge six centimeters below the right costal margin, together with a tender upper abdominal mass, was palpated.

Laboratory examinations revealed an alkaline phosphatase of 2500 I.U., an SGOT of 150 I.U., and a total bilirubin of 14.6 mg. per cent with a direct bilirubin of 8.6 mg. per cent. There was 3+ bile in the urine.

An upper gastrointestinal series confirmed the presence of a posterior upper abdominal mass which caused extrinsic pressure on the lesser curvature of the stomach and a widening of the duodenal sweep. Pancreatic calcifications were also identified (Figures 1 and 2).

At laparotomy, a thick-walled cystic mass was found at the head of the pancreas, filling the lesser sac and protruding beneath the transverse colon. Multiple frozen sections from the cyst wall revealed no signs of malignancy, and an operative as well as an histological diagnosis of

Figure 1. Upper gastrointestinal series which confirmed the presence of a posterior upper abdominal mass (pancreatic pseudocyst) revealing extrinsic pressure on the lesser curvature of the stomach (S). Pancreatic calcifications (C) may also be seen.

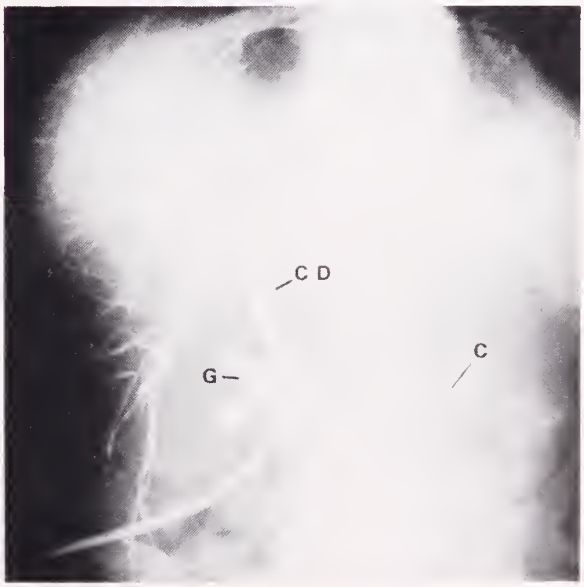

Figure 2. Operative cholangiogram taken on the patient illustrated in Figure 1 which shows dilatation and complete obstruction of the common bile duct (CD) due to the presence of a large pancreatic pseudocyst. The gallbladder and a large patent cystic duct (G) were also seen. Pancreatic calcifications (C) may also be seen.

pancreatic pseudocyst was made. An operative cholangiogram (Figure 2) and common bile duct exploration showed obstruction of the distal common bile duct due to compression by the cystic mass. The cystic duct was patent and the gallbladder was normal (Figure 2).

The pseudocyst was drained internally by means of a retrocolic pancreatic pseudocystojejunostomy done in a Roux-en-Y manner. The biliary tract was also drained with a side-to-side cholecystojejunostomy and a common duct T-tube (Figure 3).

The patient's post-operative course was smooth and his laboratory values rapidly returned to normal levels. Six weeks post-operatively, his SGOT was 21 I.U., his alkaline phosphatase, 240 I.U., and his total and direct bilirubin, 0.6 and 0.4 mg. per cent respectively.

Comment

A pseudocyst of the pancreas is in itself an uncommon lesion, while its association with jaundice is an even rarer occurrence, the incidence being estimated at from 0.007 to two per cent.[1,2,3] Although the etiology of pancreatic pseudocyst can be related to abdominal trauma, it is most frequently associated with acute or chronic pancreatitis.[4]

The diagnosis of pancreatic pseudocyst should be considered in the patient with a history of recent pancreatitis or abdominal trauma who has developed a painful mass in the upper abdomen. Radiographically, widening of the duodenal sweep with associated displacement of the duodenal bulb and distortion of the stomach are (as in the case presented) usually seen. Since the lesion can be associated with acute pancreatitis, serum amylase levels may be elevated. Diagnosis is usually confirmed at laparotomy, aided both by frozen section histological studies of the cyst wall and laboratory amylase studies of the aspirated cyst fluid.

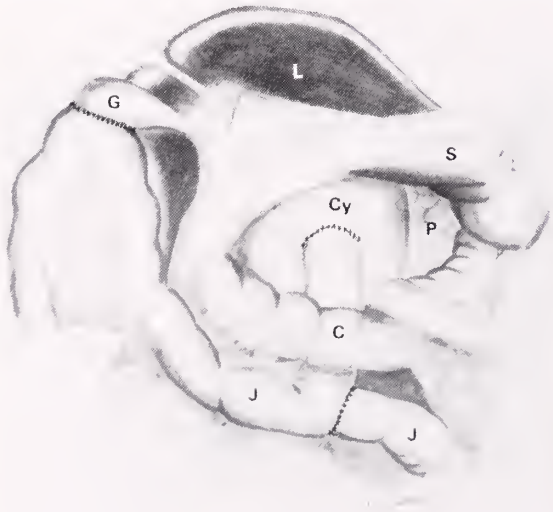

Figure 3. Illustration of the operative procedure used to drain internally the pancreatic pseudocyst (Cy) and obstructed biliary tree in the case illustrated in Figures 1 and 2. A retrocolic pancreatic pseudocystojejunostomy was done in the Roux-en-Y manner. The biliary tract was drained by means of a side-to-side cholecystojejunostomy and a common duct "T" tube. L—liver; G—gallbladder; S—stomach; Cy—pseudocyst; P—pancreas; C—transverse colon; and J—jejunum.

The type of operative treatment has varied through the years, the method selected being modified by various factors such as the severity of the illness, the location of the cyst, and the maturity of the cyst wall. Aspiration was probably the first treatment advised, but is considered unsatisfactory today. External drainage procedures have been used, but should be restricted to patients who are either severely ill or such poor surgical candidates that a more definitive operative procedure is contraindicated. Operative drainage in this manner can result in a chronic pancreatic fistula with enzyme loss. Total excision of a cyst has also been advocated, but this procedure has infrequent indications, the primary one being a small cyst located in the tail of the pancreas.

Internal drainage is the most commonly used and most advocated method of operative correction today.[3,5,6] Cystogastrostomy or cystoduodenostomy is frequently employed when the cyst is adjacent to or adherent to the stomach or duodenum and results with this procedure have, for the most part, been satisfactory. Cystojejunostomy, either by means of a side-to-side or a Roux-en-Y type anastomosis, has given the best over-all results and is felt by many to be the preferred method of internal drainage.[3]

All methods of internal drainage, however, require maturity of the cyst wall for a technically adequate anastomosis to be carried out. To assure this, Balfour has suggested a six-week waiting period from presentation of the pseudocyst to the time of laparotomy.[5]

Summary

A case of pseudocyst of the pancreas in a patient with chronic pancreatitis which presented as an abdominal mass complicated by jaundice, a rare combination, has been presented. A brief outline of the diagnostic methods and the operative treatment has been given.

A list of references may be obtained by writing The Journal.

The Role Of Ultrasound In The Diagnosis Of Renal Mass Lesions*

Michael T. Hogan, M. D.; Stanley J. Kandzari, M. D.; Wilfrido R. Castaneda, M. D.; and Sharon S. Bond, R. T.

ULTRASOUND is becoming an increasingly popular diagnostic modality. This is especially true in the abdomen where it plays a significant role in the evaluation of possible abdominal aneurysms, abdominal masses and renal masses in particular. The non-invasive nature of the technique, plus its high degree of accuracy, lends itself to clinical use. During the past year at the West Virginia University Hospital we have used diagnostic ultrasound in the work-up of 30 renal masses in 28 patients. Ultrasound distinguishes cystic from solid masses and thereby distinguishes simple benign cysts from possible malignant lesions.

Ultrasound refers to a mechanical wave with a frequency above 20,000 cycles per second, although in clinical medicine frequencies in the range of 2.25 million cycles per second are used. The mechanical wave is introduced into the body by means of a transducer applied to the skin surface. Whenever the wave encounters a tissue of a different density, an echo is produced and recorded on a storage oscilloscope from which a permanent record is made. Since renal cysts are fluid filled and completely homogenous in density, they will be echo free and will produce a cystic pattern. Solid masses consist of structures of many different densities; therefore, numerous echoes will be produced from a solid renal mass and a solid pattern is recorded.

Results

All 30 renal masses were referred to the ultrasound laboratory after being discovered on an intravenous pyelogram. Five were unsuccessful because of overlying ribs, or they were below the 2.5-3.0cm resolution limit. Eleven showed a solid pattern, of which eight were proved to be solid lesions by surgery or autopsy. One patient had angiography which showed a vascular tumor but surgery was not performed because of metastases. Another patient refused angiography, but six months later developed pulmonary metastases. One was proved to be a cyst by surgery. Fourteen showed a cystic pattern. One was proved cystic by surgery and another by a negative cytology after cyst puncture. Four were thought to be cysts by angiography and no further work-up was performed.

*Presented by Sharon S. Bond, R. T., during the Annual Convention of the West Virginia Society of Radiologic Technicians in April, 1975.

The Authors

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Discussion

The work-up of a renal mass is not universally agreed upon. Renal angiography, nephrotomography, ultrasound and cyst puncture are all involved. Obviously, the most innocuous and the most informative procedures should be utilized.

Nephrotomography is very valuable and highly accurate provided it is done properly. In the majority of cases, however, it probably is not. In Bosniak's experience of over 500 nephrotomograms, a diagnosis of renal cyst that later proved to be a carcinoma was never made.[1] He used 150 milliliters of Hypaque M 90 per cent (sodium and meglumine diatrizoate (Winthrop)[1]) mixed with 50 milliliters of glucose and water. Tomograms were taken in both the anteroposterior and oblique projection after half the contrast material had been infused and while the remaining contrast was still being administered. He demonstrated the importance of this type of nephrotomography as opposed to urography with some tomograms and also applied rigid diagnostic criteria.

Ultrasound has an accuracy in the 95 per cent range. Leopold[5] had a solid echo pattern in 26 renal masses of which 24 were proved solid and two were proved cystic for an accuracy of 92.5 per cent. He had 58 cases with a cystic echo pattern of which 56 were proven cystic for an accuracy of 96.5 per cent. Renal cyst aspiration is also very accurate. Lalli[4] used this procedure successfully in the analysis of 138 renal masses. Of these, 135 were proved to be correct, with 19 being neoplasm, one a renal abscess, and 115, cysts. The three errors were all cysts being called tumors. Seeding of tumor along an aspiration needle tract is a theoretical objection to the procedure, but to our knowledge this has never

occurred with renal tumor.[4] In addition, we know of no instance of tumor within a cyst when cytology of the cyst fluid was negative.[5]

The accuracy of renal angiography also approaches 100 per cent. Casarella[2] had 200 cases in which no cases of proved carcinoma were called cysts. He used magnification arteriography, however, which many institutions do not have. Even so, the accuracy should be in the high 90's.

Summary and Conclusion

It is our opinion that when a mass is discovered on intravenous pyelography, an ultrasound study and nephrotomography according to Bosniak's technique should be performed. If either study indicates a solid lesion, angiography is necessary. If angiography shows a tumor, surgery is recommended. If angiography shows a cystic lesion, cyst puncture is recommended. If both nephrotomography and ultrasound show the lesion to be cystic, the mass is probably a simple benign cyst. Since cytologic evidence is the only real proof of a cyst, however, some feel cyst puncture is necessary. Since both procedures have a very high accuracy and when combined have an accuracy approaching 100 per cent, others feel cyst puncture is optional.

With this combination of diagnostic modalities, we feel the highest possible accuracy short of surgery is obtained.

A list of references may be obtained by writing The Journal.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Special Article

The Pediatric Nurse Associate Program At West Virginia University: The First Three Years

Kenneth L. Wible, M. D.

Over the years, the nurse has found an ever increasing role in the delivery of primary health care.[1,2] It was with the establishment of a new program at the University of Colorado in the mid-1960's, however, that the potential of the nurse as a primary health care provider began to be realized.[3] The next several years brought a proliferation of programs with a wide range of methodology, curricula, and goals. The need to establish some systematic approach to this training resulted in the formation of a liaison committee between the American Nurses Association and the American Academy of Pediatrics. In 1971, this committee published its guidelines on short-term continuing education programs for pediatric nurse associates (PNA), or practitioners (PNP).[4] The guidelines provided basic organizational information, including a 15-point statement delineating the functions and responsibilities of the PNA-PNP.

The Establishment of a Program at West Virginia University

The continuing concern of the West Virginia University Schools of Medicine and Nursing for improvement in child health care led them to explore the concept of a non-physician primary care provider. The potentials of a nurse in this role were readily recognized.[5] Discussions were held in the summer of 1970 regarding the possibility of establishing a program which would prepare nurses for assuming increased responsibility in the area of child health. After extensive consultation with the staffs of various institutions, as well as the American Academy of Pediatrics and the American Nurses Association, a proposal for such a program was formulated.

The question of licensure remained unsettled. Toward this end, the proposal was then submitted to the State Nursing and Medical Licensing Boards for their review. In addition, the Attorney General's office was asked to consider the functional description of a PNA's duties, as summarized in Table 1, from the standpoint of its conformity with state law. It was the unani-

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Table 1

Pediatric Nurse Associate Job Description

Statement Developed by PNA Students, WVU, June 1971

Functions and Responsibilities Carried Out Under Supervision of Physicians

1. Assessment of well-children (newborn through adolescence) for growth and development and health status by means of observation, history, screening tests, physical exams and routine lab tests.
2. Assessment and management of common illnesses not requiring prescription drugs and accidents of children.
3. Educating and counseling of parents for the purpose of preventing illnesses and accidents, and maintaining and improving family health.
4. Carrying out of modified pre-determined immunization plan.
5. Administering medications with advice and consent of a supervising physician.
6. Establishing, in collaboration with physician, parameters of responsibility in dealing with patient problems.
7. Delegating and supervising of specific health care tasks to appropriate health team members.
8. Maintaining accurate and systematic records of physical findings and common problems for use by physician and other health team members.
9. Identifying resources available within the community to help children and their families and to guide parents in their use.
10. Making home visits in view of presenting health problems as indicated.
11. Participating in continued professional self-development.
12. Evaluating the contributions of Pediatric Nurse Practitioner by objective methods:
    a. Statistical Record
    b. Questionnaire, etc.
    c. Well-child: Pediatric time comparison
    d. Patient load increase

mous opinion of these bodies that the duties and responsibilities, as set forth, were in compliance with the Nurse Practice Act, thus obviating the need for special licensing legislation.

With the financial support and encouragement of the West Virginia Regional Medical Program, the first class of four nurses began their training in March, 1971. To date, 19 students hold certificates signifying satisfactory completion of the course and four additional students are in the final phase of their training. The program itself consists of four months of intensive didactic and clinical teaching conducted by the staff of the West Virginia University Medical Center followed by a six-month preceptorship under the close supervision of a pediatrician or family practitioner. The students receive instruction in physical diagnosis, growth and development, history-taking and record-keeping, pathophysiology and treatment of common pediatric disorders, developmental and perceptual screening, immunizations, parental counseling, and the most recent developments in nursing practice.

In order to assess both the adequacy and the relevancy of this training, the faculty of the Program contracted with the College of Human Resources, Division of Education and Field Research to conduct a study of the Program and its graduates.

Method

Funded by the West Virginia Regional Medical Program, the study began in January, 1974, and sought to answer several important questions: (1) In what capacity are graduates of the Pediatric Nurse Associate Program currently employed? (2) Are these students utilizing their new skills? (3) Was the training provided by the Pediatric Nurse Associate Program adequate and useful to the PNA in practical employment situations? (4) What has been the level of acceptance of the PNA Program graduates by employing physicians and by the families they serve? and (5) Are the graduates finding their new roles rewarding both professionally and economically?

The study itself consisted of personal interviews by the research staff involving three major groups: the physician-preceptor, the nurse practitioner, and the family patient. In order to standardize the material gathered at each session, interviewing guides were developed by the staff in conjunction with the faculty and a representative of the West Virginia Regional Medical Program (these are available on request). In a few extreme instances, interviews were conducted via telephone or letter when attempts at personal contact failed. Physician interviews were conducted with 10 pediatricians and two family practitioners who had served as preceptors or employers of program graduates. Eight of these physicians were male and four were female. Their average length of time in practice was 10 years with a range of five to 27 years. An average of six years of their practice experience was spent in their present location. The settings of these practices varied from private individual, to clinic, to large medical center.

Seventeen pediatric nurse associates were available for comment. Of the 17, ten had completed their training and seven were in the preceptor phase. Only seven of the 10 graduates were employed in a PNA capacity.

Interviews were also conducted with 11 families. Their educational levels ranged from seventh-grade graduate through a Doctor of Philosophy with income ranges from welfare recipients receiving approximately $4,000 dollars annually to in excess of $20,000. The number of children per family ranged from one to 10 and their ages, from infancy to adolescence.

Results

(1) In what capacity are graduates of the Pediatric Nurse Associate Program currently employed?

Table 2 summarizes the results of this particular portion of the study. Of the four students who could not be found for comment, one has since been found to be employed with the Newport News, Virginia City Health Department as a PNA.

(2) Are these students utilizing their new skills?

Table 3 reveals that 85 per cent of the PNA's time during her preceptorship phase is spent in activities relating to direct patient contact. This trend was maintained upon graduation and in

Table 2

Employment Status of Graduates of The PNA Program

(N = 21)

Status	N
Employed full-time as a PNA	7
Serving on Preceptor	7
Could not be found for comment	4*
Clinical instructor in a school of nursing	1
Employed approx. 20 hours/month as a PNA	1
Not employed as a nurse	1**
	21

* Three of the four who could not be located had completed the preceptorship and may or may not be working as PNA's.

**Stated that "personal" reasons—a new baby—as the reason she was not working.

Table 3

Approximate Percentages of a Typical Preceptorship Work Week, by Type of Activity (N = 17)

Activity	*Mean*	*Rank*	— Range — *Low*	*High*
1. Examining patients	35%	1	20%	50%
2. Recording patient histories	24%	2	10%	40%
3. Answering phone	0%	10	0%	1%
4. Phone consultation with patient	7%	5	0%	20%
5. Scheduling appointments	1%	8	0%	10%
6. Secretarial	0.5%	9	0%	3%
7. Referrals	9%	4	0%	40%
8. Counseling of parents and children	10%	3	10%	35%
9. Home visits	0%	10	0%	5%
10. Continuing Education, e.g. conducting workshops, etc.	6%	6	0%	15%
11. Other*	6%	6	0%	15%

*Included such comments as "making rounds in the hospital," "giving injections," "re-writing examination and history forms," "development of a PNA related bibliography," "teaching classes of parents with newborns," and "observation of counseling."

some private practice settings increased to 100 per cent. The activities in Table 3 were found to be representative of the PNA's routine following graduation.

(3) Was the training provided by the Pediatric Nurse Associate Program adequate and useful to the PNA in practical employment situations?

Virtually all of the physicians interviewed indicated that they were satisfied with the extent and type of training which the program had provided. In addition, they felt that the graduates would not have been able to fill their new role without the additional education. This impression is supported by the fact that one-third of these nurses had been previously employed by these same physicians prior to entering training.

PNA graduates were unable to cite any general deficiency in the training, although several felt that certain aspects relative to their needs in their particular practice situation should have received more emphasis. Interestingly enough, these same areas were often mentioned as being over-emphasized by other graduates. In short they felt that the four-month portion of the program provided them with a solid base upon which to gain further practice experience during their preceptorship.

Patient/families served by the PNA both in the preceptor phase and upon graduation were generally hesitant to make statements about the adequacy of the nurses' training, but they were unanimously satisfied with the care that they had received.

(4) What was the level of acceptance of PNA students by employing physicians and the families whom they serve?

All physicians interviewed would recommend the PNA to others whose practice consisted in large measure of pediatric patients. All families interviewed stated that they would want their pediatrician to employ such a helper and all were enthusiastic in their comments about individual nurses.

(5) Are the graduates finding their new roles rewarding both professionally and economically?

Of the seven graduates employed full-time, five were willing to reveal the extent to which their salary had increased since entering the program. These increases ranged from $2,200 to $5,980 annually with an average increase in the work week from 40 to 43 hours. Seventy-five per cent of those questioned indicated that they were satisfied with their salary at that time. All 10 of the graduates felt that the training program should be continued but were disturbed by the difficulty they and their fellow students had found in seeking employment in West Virginia. No nurse expressed regret in having become a PNA and all agreed that their present role was more satisfying than their previous professional experience.

Discussion

Despite the apparent subjective success of the PNA Program, genuine concern regarding its long-term value to patients, physicians, and the nurses themselves has surfaced. This study has attempted to uncover areas of strength and weakness in training, as well as to provide a base for continued development. Perhaps one of its most disturbing aspects lies in the fact that of the 11 graduates only seven, or approximately 63 per cent, are employed as Pediatric Nurse Associates. As Table 4 reveals, the figure nationally is approximately 76 per cent. There are a number of reasons for the slightly higher unemployment rate in West Virginia. Many of the nurses are unwilling to relocate in areas where employment is available. Many physicians continue to maintain a "wait and see" attitude and are unwilling to permit a nurse to function in what they regard to be an unorthodox manner, or they may be unaware that the assistance of such a skilled professional is available to them. Lastly, several of the graduates have chosen to retire from active practice. Attempts are being made to overcome

these obstacles. New applicants are interviewed with particular attention to their motivation and future plans, with emphasis being placed on continued service within the State of West Virginia as a criterion for acceptance. Efforts are also being increased in the area of publicity through professional groups and publications as well as the general press.

Table 4

1973-1974 Survey of PNA Training Programs Listed with AAP[10]

	Employment Status of the 1973-1974 PNP Graduates Listed with the AAP
45%	PNP in a public clinic practice
°13%	Engaged in other employment
13%	PNA/PNP in a private pediatric office practice
9%	PNA/PNP not employed but seeking employment (A significant increase from last year)
8%	PNA/PNP in a multi-specialty group practice
5%	PNA/PNP in a single specialty group practice
3%	Faculty or directors of PNP training programs
2%	Not employed and not seeking positions at present

American Academy of Pediatrics
Office of Allied Health Manpower

A corollary to the concern regarding the percentage of the graduates employed involves the nature of that employment. There would, indeed, be very little significance to a program whose graduates, although employed, were not permitted to utilize their newly acquired skills. It is obvious from the study that this is not the case. We find that program graduates spend a majority of their time (up to 100 per cent) in direct patient care. Traditionally, promotion and increasing financial reward for the registered nurse have meant withdrawal from direct patient contact and increasing responsibilities in the area of administration and teaching.

The fact that the skills acquired by a pediatric nurse associate during the course of her training are indeed new and unique is of considerable importance. The data reveal that virtually all employing physicians felt that the PNA would have been unable to function in this new role without the benefit of her additional training. This is necessarily a subjective opinion, however, as the nurses would not have been given the opportunity to test their pre-existing skills had they not been program participants. Nonetheless, this opinion is supported to some extent by the fact that about one-third of the physicians interviewed had had a professional association with these same nurses prior to their becoming nurse associates and, even in these cases, a distinct difference in their abilities was noted.

It may be argued that there is little difference between the duties of the pediatric nurse associate and that of the traditional public health nurse. The small number of nurses in our study does not permit a satisfactory comparison. Informal discussions with those of our graduates who are involved in public health nursing, however, reveal that although the tasks are not vastly different, the level of competence with which they are performed is indeed improved.

The question of curriculum adequacy is perhaps of greatest importance to the faculty but it also has a great deal of bearing upon the nurse's ability to function adequately with a minimum of hardship to the physician-preceptor or employer. It was, indeed, rewarding to find that both physicians and nurses expressed satisfaction with the extent and depth of their training. In addition, most of the families interviewed were impressed with the care that their children had received. At the present time, there is no nationally accepted basic curricula, and the absence of a national certifying examination makes it difficult to judge success in the organization of a training program. Objective testing of the students is conducted during their stay at the medical center but this does not give accurate insight into judgment, tact, and other subjective components vital to the delivery of excellent health care. It was rewarding to find that the opinion of the faculty had been supported by co-workers and patients.

As we have noted, there is some difficulty in separating the question of professional competency from acceptance by other health care workers and patients. Nationwide, pediatric nurse associates have found wide and enthusiastic acceptance.[6] Anticipatory studies, however, conducted in rural Braxton County, West Virginia, had shown that only 23 per cent of the population would be willing to assign a portion of their child health care to someone other than a physician.[7] We were pleased to find that, in random sampling of our nurses' patients, 100 per cent of them were more than willing to accept a continuation of this type of health care.

Vitally linked to the continued utilization of these health care professionals is the personal satisfaction of the nurses themselves. Previous reports have indicated that the degree of satisfaction among PNA's is indeed high.[8] All of the PNA graduates interviewed in this study found their expanded skills and responsibilities to be extremely gratifying. Naturally, economic gains have also tended to enhance this degree of satisfaction. Studies have shown, however, that the

annual income generated by a pediatric nurse associate in a private practice setting is on the average $2,500 in excess of her salary and overhead,[9] thus creating a situation which benefits both the nurse and her employer.

In conclusion, it may be said that the graduates of the PNA Program at the West Virginia University Medical Center have found employment situations which made adequate use of their skills; that these skills are indeed unique and distinct from their previous nursing experience; and that this is readily perceived by other health professionals and patients. The competence with which these skills are employed has significantly influenced the unanimous acceptance of the pediatric nurse associate by other health professionals and patients. The graduates themselves have found increased economic and professional satisfaction in their new roles, thus encouraging them to continue their efforts on behalf of the children of this State.

At the present time, there are 65 programs training allied health professionals with a total of 1,965 graduates.[10] There can be no doubt that the concept is a reality. Further research aimed at methods of improving health care delivery is, of course, needed. Current efforts, however, have made available new categories of primary health care professionals who may greatly extend the ability of the present system to meet the needs of those whom it serves. The PNA Program staff at West Virginia University will continue to promote the expanded utilization and training of the pediatric nurse associate in an effort to improve both the quality and quantity of child health care.

Acknowledgment

Our thanks to Benjamin Marshall, Floyd L. Stead, Gary Gallucci, and Saralouise Weiss of the College of Human Resources, Educational Research and Field Services, for their invaluable assistance.

Our thanks also to Dr. B. Jones and E. O'Connell who were responsible for developing the program and who aided in the writing of this manuscript.

A list of references may be obtained by writing The Journal.

New Treatment For Ulcers

A NEW treatment for controlling severe internal bleeding from stress ulcers is reported in a recent issue of *Archives of Internal Medicine*, a publication of the American Medical Association.

Hemorrhage from stress ulcers is a frequent life-threatening occurrence in patients hospitalized with cancer. The hemorrhage usually is massive and the death rate is high. Heretofore no available medical treatment was regularly effective, and surgery often did not save the life.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

WARNING
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

'Dyazide' gets excess water and salt out and helps keep essential potassium in.

Natural balance doesn't always come naturally

Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

found useful in the management of vertigo* associated with eases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

Also available as Antivert (meclizine HCl) 12.5 mg. scored lets, for dosage convenience and flexibility.

Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for usea, vomiting and dizziness associated with motion sickness.

EF SUMMARY OF PRESCRIBING INFORMATION

NDICATIONS. Based on a review of this drug by the National Academy of ciences—National Research Council and/or other information, FDA has classified he indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with notion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the estibular system.

Final classification of the less than effective indications requires further nvestigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

PAIN RELIEF FOR THE MAJORITY

NO.4—for pain intensity below the need for injectables

As a rule, only pain that requires morphine is beyond the scope of Empirin® Compound with Codeine No. 4. That's because it delivers a full grain of codeine. (In the preferred phosphate form.) Its antitussive action is particularly appreciated by patients with fractured ribs, and following chest or abdominal surgery. Its low addiction liability is a bonus for all patients who require potent analgesia.

NO.3—for almost all other kinds of lesser pain

Most other kinds of lesser pain respond to Empirin Compound with Codeine No. 3—whether musculoskeletal, neurological, soft-tissue or visceral. One might say No. 3 is an "all-purpose" analgesic — not too little, not too much. Just right for your out-patients in these categories.

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Research Triangle Park
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BURNS

Wherever it hurts

EMPIRIN® COMPOUND c̄ CODEINE

No.3, codeine phosphate*(32.4 mg) gr ½ · No.4, codeine phosphate*(64.8 mg) gr 1

*Warning—may be habit-forming.

Each tablet also contains aspirin gr 3½, phenacetin gr 2½, caffeine gr ½.

108th ANNUAL MEETING

of the

West Virginia State Medical Association

The Greenbrier

AUGUST 20-23, 1975

PLAN NOW TO ATTEND

A message from . . .

The President

SHORTEN THE LIFE LINE

With ever-lengthening wires, catheters and other attachments, we physicians have slowly drifted progressively farther from our patients. The invention and development of intricate skills, techniques and wonder drugs have brought great advances in Medicine in our professional lifetimes. These advances have reduced the risks of otherwise devastating diseases to a significant degree.

In the increased use of new advances in science, most would agree that we have sacrificed warm, personal, patient-physician relationships. We resist and resent others who would threaten this professional bond. On the other hand, in the race to excel scientifically, hasn't the bond been stretched to its limit through *our* neglect or lack of vision? Couldn't this over-stretched fiber be a major factor in causing patient dissatisfaction? And, hasn't dissatisfaction replaced negligence as the primary cause of professional liability litigation?

Physicians are wonderfully positioned to change this unpleasant situation. At the risk of over-simplification: we can fan the embers of compassion, we can strengthen the professional bond of service, we will be awarded patient trust, if we will but shorten our stethoscopes and greet *every* patient with a firm, friendly hand-shake. I invite you to join me in this pledge today.

Bill Gilmore

William E. Gilmore, M.D., *President*

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EDITORIALS

ONE SOLUTION

It is discouraging to see most of the proposed solutions to the crisis in medical liability insurance starting from the standpoint of bailing out the insurance companies by providing them subsidies of various sorts to pay claims. We have seen documented the fact that 17 cents out of every medical liability premium dollar eventually finds its way to a patient alleging some injury. The remainder, we are told, goes to plaintiff and defense attorney fees, various other legal costs, and insurance company administrative costs and profits. We are told that insurance companies are going broke on medical liability insurance rather than making a profit. It thus is made clear that, far more than providing protection for doctors, they are providing a form of welfare for lawyers.

Now, we recognize and even sympathize with the lot of lawyers. We know, because they have told us, that most eke out a living just slightly above the poverty level. We also know, because they have told us, all about their philanthropic and charitable interests as well as their tender and compassionate regard for their fellow man.

We have heard them tell how badly they feel about the necessity of providing a contingency fee system for their needy clients and how it is only a result of their abiding spirit of good will and generosity that they agree to it. We have been brought close to tears listening to them describe their aged parents and the number of little mouths they have to feed and the children to clothe. Lord, keep us from ever contributing in even the slightest way to the further deprivation and degradation of these noble and public spirited men and women.

But, and this is difficult, even granting all their pressing needs, we still should not allow them to sue doctors right out of business. It just wouldn't be right; besides, what are they going to live on after we're gone?

Rather than increasing the number of dollars available for insurance companies to pay claims to offended patients with attorneys at side, we suggest it would be far cheaper for the government to simply negotiate a sum designed to support a lawyer and family in a style agreeable to the legal profession and start paying that as a subsidy to members of the bar beginning with the day of their graduation from law school. With this problem out of the way, Congress could then vote a much lesser sum to a fund for those who claim injury at the hands of a doctor. The only restriction on this fund might be that lawyers, on pain of having their lips permanently sewn together by means of sharpened bed slats threaded with bull rope, would be forever barred from laying sticky fingers on any of it.—SDW.

One of the important and interesting features of the human body is its ability to maintain a normal red blood cell count and a normal amount of hemoglobin in old age.

RED BLOOD COUNT AND HEMOGLOBIN IN OLD AGE

The present view is that the red cell count, the hemoglobin, and hematocrit estimations in the aged are within normal limits, or at the most, only very slightly reduced. There are those who believe that there is a significant decline both in red cell count and in hemoglobin as age advances, but the burden of proof lies with these individuals. Wintrobe has suggested that if there is a declining value in old age, it may be due to malnutrition. As regards the fact that in adult life the hemoglobin of the female is somewhat less than that of the male, it has been pointed out that with advanced age this difference disappears.[1] It has been suggested that perhaps this is due to the elimination of testosterone in the male.

A recent article reaffirms the consistency of the number of formed elements in the blood of the aged. Earney and Earney[2] in 1972 made a comprehensive hematological study on 400 geriatric patients (200 males and 200 females) in a nursing home. All the subjects were ambulatory and considered normal groups for the 70-80 and 81-90 age brackets. It was observed that geriatric values have a broader range than that of standard adult values. There are also quantitative differences in the mean value between geriatric men and women. There were, however, no indications that age beyond 70 affected the mean values of the geriatric group.

It is to be emphasized that not only are there a normal number of red blood cells present in the aged, but white cell counts, both total and differential, are also normal. Olbrich[3] believes there is evidence which indicates a diminution of production and destruction of both red and white cells. This would mean that the cell population of the peripheral blood is presumably maintained for a longer period.

In any event, the logical conclusion which may be drawn is that the hemopoietic system is presumably less subject to the change of senescence than most other tissues of the body. As a consequence it is an error to regard anemia as a physiologic expression of the aging process.

1. Bourne, G. H. *Structural Aspects of Ageing.* London. Pitman: 1961.
2. Earney, W. E. and Earney, A. J. J. Amer. Geriatrics Soc. 20: 174, 1972.
3. Olbrich, O. Blood Changes in the Aged. Edinb. Med. J. 55: 100, 1948.

Our Readers Speak

'UNUSUAL EDITORIALS'

It seems to me you are printing some very unusual editorials and letters. About a year ago one of the main editorials dealt with the Watergate mess. This was right at the height of the "stink" and this particular author suggested dropping the entire matter. He "had heard enough about it."

Recently there was a letter praising Governor Jimmy Carter. I suppose this is the same one who has announced his candidacy for President of the United States. Now, this man could well be a wonderful person, wonderful governor, wonderful Christian, and a wonderful preacher. But I do not understand why he should get free advertising in a medical journal which is not in the habit of endorsing candidates.

There was also an editorial recently fussing about the dues and assessment of the AMA and which stated that "Prism" was the most worthless thing that had ever been printed. I presume this was the same author who wanted a whitewash on Watergate. Whoever it was should get his head out of the Dodo Place and read "Prism" and maybe find out what goes on in the non-medical world. Strangely enough, after this editorial, there was a main article in "Prism" by a very famous, concerned Russian Communist, named Solzhenitsyn. He gave one of the most appealing reasons for the continuation of the private practice of medicine that I have read recently.

I see no reason why professional journals should not express opinions on social or political issues, but if you are going to start this, I hope you can have some articles which are a bit more reasonable.

Donald E. Cunningham, M. D.
55 Main Street
St. Albans, W. Va. 25177

Vietnamese Orphans No Threat To U. S. Health, Says AAP

The nearly 2,000 Vietnamese orphans who have been air-lifted to this country in recent weeks display a variety of illnesses, but no diseases "of a unique or serious nature which might be introduced into this country," a special Task Force on Medical Care of the Vietnamese Child has reported. The Task Force was organized by the American Academy of Pediatrics.

GENERAL NEWS

Scientific Program Nearly Completed For 108th Annual Meeting

Plans have been completed for the three general scientific sessions to be held during the 108th Annual Meeting which will be held at The Greenbrier in White Sulphur Springs, August 20-23, 1975.

Dr. Philip M. Sprinkle of Morgantown, Chairman of the Program Committee, said that the general sessions will be held during the morning hours of the convention and that all but one or two meetings of sections and affiliated societies will meet at the breakfast hour to enable those in attendance to relax and enjoy the many recreational facilities available at the resort hotel during the afternoon hours.

Vincent T. DeVita, Jr., M. D.

Paul B. Chretien, M. D.

The first general scientific session on Thursday morning, August 21, will feature a "Symposium on New Concepts in Cancer Diagnosis and Therapy." Dr. Raymond B. Weiss, Assistant Professor of Medicine and Chairman of the Division of Medical Oncology at the West Virginia University School of Medicine, has been selected to serve as moderator. It was announced previously that Dr. Ariel C. Hollinshead, Professor of Medicine at the Laboratory for Virus and Cancer Research at the George Washington University School of Medicine, would participate in the program. The other three members of the panel will be as follows:

Vincent T. DeVita, Jr., M. D.

Dr. Vincent T. DeVita, Jr., Director of the Division of Cancer Treatment, National Cancer Institute, NIH, Bethesda, Maryland, is a native of Bronx, New York.

He was graduated from the College of William and Mary and received his M. D. degree in 1961 from the George Washington University School of Medicine. He interned at the University of Michigan Medical Center and served residencies at the District of Columbia Hospital, Yale-New Haven Medical Center and at the National Cancer Institute in Bethesda. Since 1966 he has been associated with the National Cancer Institute in Bethesda and was named to his present position in 1974. He also serves as Professor of Medicine at the George Washington University School of Medicine.

Doctor DeVita was certified by the American Board of Internal Medicine in 1968 and also holds certification in the sub-specialties of hematology and medical oncology. He is a member of the American Medical Association, American College of Physicians and American Society for Clinical Investigation. He is a member of the Board of Directors of the American Society of Clinical Oncology and was a recipient of the Albert and Mary Lasker Medical Research Award in 1972. He also delivered the First Annual Clowes Lecture at the Roswell Park Memorial Institute in 1973.

Paul B. Chretien, M. D.

Dr. Paul B. Chretien, Head of the Tumor Immunological Section and Assistant Chief of the Surgery Branch, National Cancer Institute, Bethesda, Maryland, is a native of San Angelo, Texas.

He was graduated from St. Louis University School of Medicine and received his M. D. degree in 1957 from the St. Louis University School of Medicine. He interned at Bellevue Hospital Center in New York City and served residencies in surgery at that Center and at the Memorial Hospital Center in New York and the National Cancer Institute in Bethesda. He has served in his present position since 1973.

Doctor Chretien was certified by the American Board of Surgery in 1963 and is a member of the American College of Surgeons, James Ewing Society and the Society of Head and Neck Surgery.

He has continued clinical studies of combined chemotherapy and surgery for the treatment of malignancies and received the Superior Service Award for Clinical Care for Research in Cancer in 1974. He is the author or co-author of more than 80 scientific articles and several chapters in textbooks.

'Mini-Diabetic Seminar'

Doctor Sprinkle also announced that Dr. John W. Traubert, Chairman of the Department of Family Practice at the West Virginia University School of Medicine, will serve as moderator for the general scientific session on Saturday morning which will feature a "Mini-Diabetic Seminar."

Speakers will include Dr. James M. Moss of Washington, D. C.; Dr. Thomas G. Skillman of Columbus, Ohio; and Dr. Stanley R. Shane, a member of the faculty at the West Virginia University School of Medicine.

James M. Moss, M. D.

Dr. James M. Moss, Clinical Professor of Medicine at the Georgetown University School of Medicine, is a native of Bradley, Georgia.

He received his M. D. degree in 1941 from the University of Virginia School of Medicine and served his internship and a residency at the University of Virginia Hospital. He also served as a Fellow in Endocrinology at Duke University Hospital in Durham, North Carolina.

Doctor Moss was certified by the American Board of Internal Medicine in 1952 and in addition to his faculty position at Georgetown he has been engaged in the private practice of medicine since 1949 in Alexandria, Virginia. He is a Fellow of the American College of Physicians and the American College of Cardiology. He has served as an Editorial Consultant for the American Academy of Family Practice since 1968 and has served as a member of the Editorial Board of *Virginia Medical Monthly*.

He has been active in organized medicine for a number of years and served as President of the Medical Society of Virginia, 1970-71, and during World War II served as a Major in the Medical Corps of the United States Army from 1942 to 1946.

Thomas G. Skillman, M. D.

Dr. Thomas G. Skillman, Professor of Medicine at the Ohio State University School of Medicine, is a native of Cincinnati, Ohio.

James M. Moss, M. D.

Thomas G. Skillman, M. D.

He was graduated from Baldwin Wallace College and received his M. D. degree in 1949 from the University of Cincinnati College of Medicine. He interned at Cincinnati General Hospital and for five years served as a resident and as a Fellow in Endocrinology at the same hospital. He served as a member of the faculty at the University of Cincinnati from 1957 to 1961 and then served as Professor of Medicine at Creighton University School of Medicine until 1967, at which time he assumed his present position. He also served as Chief of Endocrinology and Metabolism from 1967 to 1974.

Doctor Skillman was certified by the American Board of Internal Medicine in 1957 and is a member of the American Diabetes Association, American Federation for Clinical Research, Central Society for Clinical Research and the Central Diabetes Study Group.

Scientific Session on Friday Morning

It was announced previously that Doctor Chretien also will speak at the second general scientific session on Friday morning. Other speakers that morning will include Dr. Russell V. Lucas, Jr., Professor of Pediatrics at the University of Minnesota School of Medicine; and Dr. Charles A. White, Jr., Professor and Chairman of the Department of Obstetrics and Gynecology at the West Virginia University School of Medicine.

Business Sessions

The Pre-Convention Meeting of the Council will be held on Wednesday morning, August 20. The first session of the House of Delegates is scheduled that afternoon.

Dr. Max H. Parrott of Portland, Oregon, who will be installed later this month as President of the American Medical Association during the Annual Meeting in Atlantic City, will be the principal speaker at the first session of the House of Delegates.

Dr. William E. Gilmore of Parkersburg, President of the State Medical Association, will deliver his Presidential Address at the second and final session of the House of Delegates on Saturday afternoon, August 23.

Advance Registration Heavy

Physicians planning to attend the meeting are urged to make reservations at The Greenbrier as soon as possible in order to be assured of room accommodations at the hotel. It is anticipated that more than 600 persons including physicians, their wives and guests will be in attendance.

Additional information concerning the 108th Annual Meeting will be published in the July and August issues of *The Journal*.

Regents Appoint Doctor Meiling Medical Education Consultant

Dr. Richard L. Meiling, M. D., a physician and educator widely experienced in long-range health care planning and development, recently was appointed consultant to the West Virginia Board of Regents for medical education, Regents Chancellor Ben L. Morton announced.

Richard L. Meiling, M. D.

Doctor Meiling, Emeritus Vice President of The Ohio State University and Emeritus Professor of Obstetrics and Gynecology at the College of Medicine, presently is a member of the Health Services Advisory Committee of the Association of American Medical Colleges, the Committee on Long-Range Planning of the American Medical Association, and the Committee on Quality of Care of the AAMC.

Doctor Meiling's appointment as medical education consultant is supported by a grant from the Claude Worthington Benedum Foundation through June 30, 1975, Doctor Morton said.

A native of Springfield, Ohio, Doctor Meiling is a graduate of Wittenberg University, Springfield, Ohio, and received his M. D. degree in 1937 from the University of Munich, Germany.

A retired Major General, United States Air Force, Doctor Meiling, 66, served for two years as Assistant to the Secretary of Defense for Medical and Health Affairs. From 1970 to 1974, he was Vice President for Medical Affairs at The Ohio State University. He was formerly Dean of the College of Medicine, Associate Dean, Director of University Hospitals, and Associate Director, University Hospitals, at OSU during his 23-year career at the University.

He has held many posts in federal government, including Delegate to the World Health Organization and Consultant to the National Institutes of Health, Department of Health, Education and Welfare.

He is a member of numerous medical associations, and a consulting editor to The Ohio State Medical Journal.

Commenting on the appointment, Chancellor Morton said, "We feel Doctor Meiling will make a valuable contribution to medical education planning in West Virginia during his tenure with the Board of Regents.

"I have pointed out in the past, to members of the West Virginia Legislature and to the taxpayers of the Mountain State, that we need direction in the development of what is a highly complex and quite expensive undertaking—medical education. I feel certain that Doctor Meiling will assist us in finding the proper path in this important undertaking."

$4,000 Scholarships Awarded Four WVU Students By Association

Four young West Virginia students have been awarded four-year scholarships to the West Virginia University School of Medicine by the West Virginia State Medical Association.

Dr. Martha Jane Coyner of Harrisville, Chairman of the Association's Committee on Medical Scholarships, announced that the recipients for this year's awards will be as follows:

Mary S. Boyd

Rosemarie Cannarella

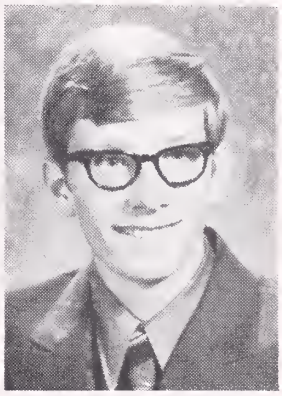
Francis M. Cryan of Vienna, Rosemarie Cannarella, Follansbee; Mary S. Boyd, Huntington, and Samuel D. Hensley, Jr., Dry Branch (Kanawha County). The recipients of the scholarships will receive $1,000 for each of the four years while enrolled in the School of Medicine.

The four students have been accepted by the School of Medicine to begin studies next fall leading toward M. D. degrees.

Cryan, who received a B. S. degree in premedicine from the University of Notre Dame, is the son of Mrs. Ruth Cryan and the late Francis M. Cryan of Vienna. He currently is employed by Union Carbide Ferroalloys in Marietta, Ohio.

Miss Boyd, who received a B. S. degree in mathematics from West Virginia Wesleyan College in

Francis M. Cryan



Samuel D. Hensley, Jr.

The Medical Scholarships Committee of the State Medical Association met in Morgautown, May 3-4, to conduct interviews and award $4,000 scholarships to four West Virginia students. Seated, from left, are Drs. Clark K. Sleeth, Morgantown; Martha Jane Coyner, Chairman, Harrisville; and Russel Kessel, Charleston; standing, from left, Drs. Marshall J. Carper, Charleston; John Mark Moore, Wheeling; Thomas J. Holbrook, Huntington, and Robert D. Hess, Bridgeport.

1974, is the daughter of Mr. and Mrs. Thomas W. Boyd of Huntington. She currently is employed in the admissions office at Wesleyan.

Hensley received a B. A. degree in chemistry from WVU last month. He is the son of Mr. and Mrs. Samuel D. Hensley of Dry Branch.

Miss Cannarella, the daughter of Mrs. Rose A. Cannarella and the late Thomas H. Cannarella of Follansbee, received a B. S. degree in medical technology from WVU last month.

Doctor Coyner noted that the four scholarships awarded this year bring to 36 the total number of scholarships which have been awarded to deserving students since the medical association started the program in 1958.

The Association awarded two scholarships annually until 1974, when the number was increased to four for the purpose of recruiting more physicians for West Virginia. Under the terms of the scholarships, recipients must agree to practice in West Virginia for four years following graduation, completion of postgraduate training and military obligations.

The Medical Scholarships Committee met in Morgantown on Saturday and Sunday, May 3 and 4, to interview applicants for the grants.

Committee members present for the interviews were the Chairman, Doctor Coyner, and Drs. Russel Kessel and Marshall J. Carper, both of Charleston; Robert D. Hess of Bridgeport, Thomas J. Holbrook of Huntington, John Mark Moore of Wheeling, and Clark K. Sleeth of Morgantown. Also present to assist the committee was Mr. Custer B. Holliday, Executive Assistant, State Medical Association.

Physicians Attend State Chapter Of AAFP Scientific Assembly

More than 175 physicians attended the 24th Annual Scientific Assembly of the West Virginia Chapter of the American Academy of Family Physicians at the Lakeview Inn and Country Club in Morgantown, April 25-27.

Dr. John W. Traubert, Chairman of the Department of Family Practice at the West Virginia University Medical School, was installed as State President. He succeeds Dr. William D. Crigger of South Charleston.

AAFP President Speaks

Assisting in the installation ceremony during the Academy's banquet on Saturday evening, April 26, was Dr. Herbert A. Holden of San Leandro, California, AAFP President. As a banquet speaker, Doctor Holden stated that the new breed of medical practitioners—the family practice specialists—are

Dr. John W. Traubert, center, was installed as President of the West Virginia Chapter, American Academy of Family Physicians, during the Chapter's 24th Annual Scientific Assembly held this spring in Morgantown. Doctor Traubert, who succeeds Dr. William D. Crigger of South Charleston, seated, was installed by Dr. Herbert A. Holden, right, of San Leandro, California, AAFP President.

forsaking the big cities for the small towns and rural areas.

"Preliminary figures from an AAFP survey show that 35 per cent of the medical students training as family doctors are going into communities of less than 15,000 population," Doctor Holden said. "Today's medical trainees have a strong social consciousness. They want to be involved in solving the health and social problems of our time on a personal basis." He added that the construction of new highways, computer terminals providing access to metropolitan care centers and other technological improvements now prevent young doctors and their families from feeling they are isolated

Dr. John W. Traubert, new President of the West Virginia Chapter, AAFP, left, presents a special award, a "Mister Doc" plaque, to Dr. L. A. Lyon of Wheeling, a family physician for 45 years.

from the mainstream of society by opening practices in smaller towns.

Doctor Holden lauded the progress being made in West Virginia, where the family practice residency programs have more than doubled in a single year, and also praised the practicing physicians who are giving their "time and substance" in helping train the new residents in family practice centers at South Charleston, Clarksburg, Wheeling and Morgantown.

The AAFP President said that whereas medical students in some schools formerly were discouraged from considering family medicine the reversal is true today. "This year 20 per cent of all medical students across the country are going into family practice," he stated. "The revival of family practice as a new medical specialty already is helping to solve the problem of maldistribution of physicians in this country," Doctor Holden added. "The family physician is what the public wants."

Dr. Carl B. Hall Banquet Speaker

Sharing the speaker's platform during the banquet was Dr. Carl B. Hall of Charleston, now President-Elect of the AAFP. He will be the first West Virginian to head the national medical organization. During his brief remarks, Doctor Hall commented:

"Being in family practice gives one better communication with the patient. I like the idea of taking care of the family as a unit; you see the interactions among members of the family and use that in your diagnosis. The result is much better delivery of health care."

Doctor Crigger Addresses Opening Session

Doctor Crigger, speaking at the opening session of the Scientific Assembly, recommended that, if economics make the Greenbrier College of Osteopathic Medicine an institutional orphan, its assets be transferred to Marshall University. He told colleagues, "Huntington then will have a ready-made medical training center and West Virginians will be spared the multi-million dollar burden that will be eventually necessary to develop a second medical school in this state."

Taking note of the crises whirling about the Lewisburg center that opened only last October, Doctor Crigger said its 36 students could be absorbed into the Veterans Administration-related community medical program at Marshall. "At the same time several forward steps can be taken in organizing a family practice educational program," he commented.

The retiring Academy President said the West Virginia University Medical Center facility could be expanded at the same time to meet student needs "at a cost far less than projected for the Huntington-Lewisburg medical teaching centers."

Dr. Ray M. Kessel President-Elect

Dr. Ray M. Kessel of Logan was elected President-Elect of the Academy. A native of Charleston, Doctor Kessel graduated from WVU and received his M. D. degree in 1955 from Jefferson Medical College. He has practiced in Logan since 1956. Doctor Kessel became a charter Fellow of the AAFP in 1960. He has been an attending physician at both Logan General and Guyan Valley hospitals in Logan and serves as a courtesy staff member of the Appalachian Regional Hospital in Man.

Doctor Kessel supports development of the family practice-oriented medical school at Marshall University. "This eventually will give more input to the physician placement in Southern West Virginia," he commented. "There is a noticeable shift of the medical population to smaller population centers. With the support of the entire medical profession in this state we can begin soon to watch the number of doctor-less counties in West Virginia decline sharply."

Shown during the Scientific Assembly of the West Virginia Chapter, AAFP, are, from left, Drs. Seigle W. Parks, Charleston; Jacob C. Huffman, Buckhannon; and Herbert A. Holden, San Leandro, California, AAFP President.

Dean Jones Welcomes Physicians

During welcoming remarks to the family physicians, Dr. John E. Jones, Dean of the WVU Medical Center, said he was hopeful the steadily increasing number of physicians going into family practice would soon begin to erase the State's doctor shortage. The Medical Center chief, reporting on an interest survey taken recently among members of the 1975 fourth-year class, said the survey showed that 49 per cent of the class will remain in the State after graduation (see *WVU Medical Center News*, Page xii).

The present level of student interest in the Mountain State, Doctor Jones told the Academy, is five times what it was only five years ago. Young doctors entering the family practice residency program represent almost 20 per cent of the graduates, he continued, and this year the program will double with practice centers operating in South Charleston, Clarksburg, Wheeling and Morgantown. "Public expectation is high," Doctor Jones remarked.

Management Consultant Speaks

Also speaking at the Academy banquet was Mr. David L. Schmidt of Schmidt, Pryor & Company, Management Consultants, in Mission, Kansas. Mr. Schmidt discussed the image of the physician in the eyes of his various publics—the staff member, the administrator, the pharmacist, the insurance company, the press, his neighbors and—the most important—the patient. He stated that the average staff member holds the physician in "high esteem" when it comes to providing medical skills, but recommended that a physician should attempt to gain an anonymous feedback from his staff rating his management abilities. Mr. Schmidt said the staff member has opinions about the management ability of the physician that may be "quite in contrast with this high esteem of medical skill."

His "prescription" as a management consultant for improving the physician's image is:

"Take a look at how you're dealing with tension. What kind of work habits have you developed and how are they being perceived by your various publics? What ability do you have to completely listen through rather than to other people? Are you working to overcome preoccupation? Do you call a patient or a member of your public by first name when you address them? Last names are better than no name at all!"

Dr. L. A. Lyon Honored

The Academy, in a special award to one of its members, presented a "Mister Doc" plaque to Dr. L. A. Lyon of Wheeling, a family physician for 45 years. The Canadian-American reaches his 80th birthday later this year. Doctor Lyon earned his M. D. degree at the University of Toronto, and took his internship at Wheeling Hospital in 1926. He is a Past President of the Ohio County Medical Society.

Some 18 physicians representing eight states presented scientific papers during the Assembly. The speakers and their topics were previously reported in *The Journal*.

Other Officers Elected

Other officers elected included Dr. Marshall J. Carper, Charleston, Vice President; Asel P. Hatfield, Harrisville, Secretary; and Thomas P. Long, Man, Treasurer.

Re-elected were Drs. Joseph A. Smith of Dunbar and Del Roy R. Davis of Kingwood as AAFP Delegates and Richard E. Flood of Weirton as Alternate Delegate. Newly-elected as the second Alternate Delegate was Dr. L. Dale Simmons of Clarksburg, who succeeds Dr. Joe N. Jarrett of Oak Hill.

Elected to the Board of Directors for District IV was Dr. A. P. Brooks, Parkersburg; and Dr. I. M. Kruger, Logan, District VI. Re-elected to the Board were Drs. Thomas L. Ritz, Wheeling, District I; John L. Fullmer, Morgantown, District II; Milford F. Townsend, Petersburg, District III; Robert D. Hess, Bridgeport, District V; George W. Hogshead, Nitro, District VII; and William S. Sadler, Barboursville, District VIII.

The 1976 meeting of the West Virginia Chapter will be held in Charleston, April 9, 10 and 11.

Spring Meeting Of The Council In Charleston On April 13

The Spring Meeting of the Council was held in the headquarters offices of the West Virginia State Medical Association on Sunday, April 13, with the Chairman, Dr. A. Thomas McCoy of Charleston, presiding.

Doctor McCoy introduced Mr. Charles W. Murfin of Chicago, American Medical Association Regional Director for the Midwest Region.

Election Of Honorary Members

The following physicians, who had been elected to honorary membership by their component medical societies, were also named to honorary membership in the State Medical Association, effective with the year 1975:

Lee F. Dobbs, Greenville, and Bascomb B. Young, Stuart, Florida (Cabell); Max O. Oates, Martinsburg (Eastern Panhandle); W. B. Davis, Rainelle (Fayette); James H. Gray, Belle, and Walter G. J. Putschar, Boston, Massachusetts (Kanawha); William E. McIlvain, Glen Easton (Marshall); and Edward N. Pell, Wheeling (Ohio).

Dues-Waived Proposal

The Council referred to the Committee on Constitution and By-Laws for study a proposal that dues be waived for certain older physicians attaining a certain age so they could prepare for retirement if desired.

Report On West Virginia Medical Institute

The Council heard a progress report on the West Virginia Medical Institute, Inc. by Mr. Charles R. Lewis, Executive Director. Mr. Lewis noted that the Institute staff had worked with more than a half dozen hospitals toward establishment of utilization reviews and medical audit procedures.

He also reported that (1) professional review had been completed by a panel of Institute physicians in more than 600 cases referred to the Institute under a medical consultant agreement with Southern West Virginia Blue Plans, (2) the State Plan for Professional Standards Review Organization (PSRO) activity was virtually complete; and (3) the Institute had joined with the Southern West Virginia Blue Plans, the West Virginia Hospital Association and the Health Insurance Benefits Unit in the West Virginia Department of Health to develop a detailed guideline manual to assist hospital medical staffs implement pre-PSRO utilization review regulations covering Medicare and Medicaid patients.

Mr. Lewis Named Executive Secretary

The Council discussed the replacement of Mr. William H. Lively, who had resigned as Executive Secretary of the Association effective May 1, and appointed several members of the Executive Committee to meet later to formalize the naming of a new Executive Secretary. (Subsequently, this meeting was held in Charleston on April 20, and Mr. Charles R. Lewis of Charleston was named Executive Secretary of the Association, effective May 1).

Budget Approved

The Council approved unanimously a budget as prepared and submitted by Dr. Kenneth G. MacDonald, the Treasurer, for the first quarter of calendar 1975. Doctor MacDonald said such a budget will be prepared for Council consideration on a quarterly basis. Council members agreed that copies of the Association budget should be mailed to secretaries of all component medical societies.

Expenses Of Officers And Councilors

The Council voted unanimously to request the Chairman to name an Ad Hoc Committee to study what expenses should and should not be paid by the Association to officers and Councilors attending official meetings of the Association, and to come up with some definite recommendations and guidelines. Doctor McCoy named to the committee Doctor MacDonald, Dr. Worthy W. McKinney of Beckley and Dr. Harry S. Weeks, Jr., of Wheeling with a further request that a report be prepared for presentation at the Pre-Convention Meeting of the Council in August.

Physician Assignments Endorsed

It was reported that several small communities and organizations in the State had requested the Council to certify the need of assignment of physicians by the National Health Service Corps in their areas. The requests had come from the Health Planning Association of North Central West Virginia in Taylor County, the Pocahontas Medical Services, Inc., in Marlinton and Greenbrier County, and the Franklin and Pendleton County area.

The Council voted to endorse the physician assignments after being assured that the officers of the component medical societies in those areas also had certified the need.

Report On UMW Physicians' List

Dr. Carl J. Roncaglione of Charleston, Chairman of the Association's Medical Economics Committee, gave a detailed report—in his parallel role as Chairman of an Ad Hoc Committee—of continued negotiations with United Mine Workers of America representatives with regard to a physicians' list problem of long standing in Kanawha County. The matter was the subject of a resolution offered by the Kanawha Medical Society, adopted by the State Association's House of Delegates at the 1974 Annual Meeting and reported in the October, 1974, issue of *The Journal.*

Dr. Flood Recommended For LPN Board

The Council unanimously agreed that the name of Dr. Richard E. Flood of Weirton be submitted for nomination to the Governor for reappointment to the Board of Examiners for Licensed Practical Nurses. Doctor Flood is Chairman of the Association's Nurses Liaison Committee.

Primary Care Proposal

Following a lengthy discussion of the second draft of "Standards for Primary Care in West Virginia," a proposal prepared by the State Office of Comprehensive Health Planning, the Council approved appointment by the Chairman of an Ad Hoc Committee to study the proposal and draft an appropriate reply. Appointed to the committee were Drs. Roncaglione, W. Alva Deardorff and J. L. Mangus, all of Charleston.

Legislative Report

In a review of the 1975 session of the State Legislature, Mr. Lewis called Council's attention to enactment of a measure to provide civil immunity for persons providing information to, or serving as members or employees of, committees engaged in various peer review activities.

Dr. George R. Callender, Jr., of Charleston outlined activity leading to a gubernatorial veto of a radiologic technologists bill opposed by the Association in the form introduced and passed (the veto was subsequently sustained by the Legislature). He described two podiatrists bills, and another related to physicians' assistants, that failed of passage. Doctor Callender said the Association hoped to have some input into the PA legislation, in particular, before it is re-introduced next year. He added that it was anticipated further discussion would be held by Association representatives with sponsors of

other legislation prepared for introduction or reintroduction in the 1976 session.

Request For New Component Society Heard

The Council was informed of contact with the Executive Secretary by Dr. Earl D. Allara of Charles Town regarding a desire on the part of Jefferson County physicians to withdraw from the Eastern Panhandle Medical Society and establish their own new component organization. The Jefferson members have explained they are unable to attend regularly scheduled meetings of the Eastern Panhandle group because of the distance they must travel.

The Council directed the Association staff to contact Dr. Hiram Sizemore, Jr., President of the Eastern Panhandle Society, to ascertain if there would be any objections to the nine Jefferson physicians forming their own society. The staff was instructed to report back to Council at its next meeting.

The meeting was attended by Dr. A. Thomas McCoy of Charleston, Chairman; Dr. William E. Gilmore of Parkersburg, President; Dr. Jack Leckie of Huntington, President Elect; Dr. John J. Mahood of Bluefield, Vice President; Dr. Kenneth G. MacDonald of Charleston, Treasurer; Dr. Worthy W. McKinney of Beckley, Councilor at Large; and Drs. Robert R. Weiler of Wheeling; Ray M. Kessel of Logan; Robert D. Hess of Bridgeport; Lyle D. Vincent of Parkersburg; Harold N. Kagan of Huntington; W. Alva Deardorff and J. L. Mangus of Charleston; and David F. Bell, Jr., of Bluefield; and Mr. Custer B. Holliday of Charleston, Acting Executive Secretary; Mrs. Mary W. Hamilton of Charleston, Administrative Assistant; and Mr. Charles R. Lewis of Charleston, Projects Director.

The meeting also was attended by Dr. Frank J. Holroyd of Princeton, AMA Delegate; Dr. George R. Callender, Jr., of Charleston, AMA Alternate; Dr. C. A. Hoffman of Huntington, Chairman of the Insurance Committee; Dr. N. H. Dyer of Charleston, Director of the State Health Department; Dr. Carl J. Roncaglione of Charleston, Chairman of the Medical Economics Committee; Dr. Pat A. Tuckwiller of Charleston, former Chairman, Committee on Medical Education and Hospitals; Dr. George F. Fordham of Mullens; Dr. Winfield C. John and Dr. Tara Sharma of Huntington; and Mr. Charles W. Murfin, AMA Regional Director for the Midwest Region.

State Auxiliary's Spring Board Meeting Held In Beckley

The annual spring Board Meeting of the Woman's Auxiliary to the West Virginia State Medical Association was held April 16 and 17 at the Holiday Inn in Beckley. Mrs. William T. Lawson of Fairmont, President of the State Auxiliary, presided.

The meeting was attended by members of the Board of Directors, State committee chairmen, and presidents and presidents-elect of local auxiliaries.

State convention plans were announced. The Auxiliary's convention will be held August 20-23 at The Greenbrier in White Sulphur Springs in conjunction with the 108th Annual Meeting of the State Medical Association.

Changes in the national auxiliary structure which will affect state and local groups were discussed.

A workshop for State and county officers was conducted by Mrs. Robert R. Weiler of Wheeling, President-Elect. The program also included a tea, hobby show and dinner at the Glade Springs Country Club.

The Raleigh County Auxiliary served as host for the annual meeting.

W. Va. Physicians Will Attend AMA Convention, June 14-19

A number of West Virginia physicians will be among some 9,000 physicians attending the 124th Annual Convention of the American Medical Association, June 14-19, in Atlantic City, New Jersey.

The West Virginia Medical Association's two Delegates to the AMA House of Delegates are Drs. Richard E. Flood of Weirton and Frank J. Holroyd of Princeton, with Drs. George R. Callender, Jr., of Charleston, and Harry S. Weeks, Jr., of Wheeling, as Alternate Delegates.

Dr. Stephen D. Ward of Wheeling is a member of the AMA's Board of Trustees' Council on Legislation, and Dr. Mildred Mitchell-Bateman, Director

Drs. Frank J. Holroyd, left, of Princeton, and Richard E. Flood of Weirton are the State Medical Association's Delegates to the American Medical Association. The 124th Annual Convention of the AMA will be held this month in Atlantic City, New Jersey.

of the State Department of Mental Health, serves as a Consultant for the Board's Council on Mental Health.

The business meeting of the AMA House starts on Sunday, June 15 and is slated to end Thursday, June 19. Hearings before reference committees will be held on Monday, June 16.

The House of Delegates will meet in the Grand Ballroom of the Chalfonte-Haddon Hall, the headquarters hotel.

Postgraduate courses, the scientific program and scientific exhibits will begin on Saturday, June 14 at Convention Hall.

The 1975 Annual Convention of the AMA Woman's Auxiliary will be held June 15-18 at Howard Johnson's Luxury Motor Hotel, with Mrs. Howard Liljestrand of Hawaii, President, in charge.

There will be a total of 60 postgraduate courses, an array of scientific exhibits, and programs of the section councils. General sessions will be held on the topics of "Symposium on an Emergency Room Approach to the Management of the Comatose Patient," "The Federal Thrust in the Organization of Health Care," "The Regulation of Therapeutics: Package Inserts and Their Significance to Physician, Patient, and Pharmacist," and "Sexual Enrichment."

Max H. Parrott, M. D., of Portland, Oregon, will take office during the convention as new President of the AMA, succeeding Malcolm C. Todd, M. D., of Long Beach, California.

PSRO Seminar To Be Held By Hospital Groups

A seminar on "PSRO Implications for Hospital Management" will be held June 23-25 at the Holiday Inn (Charleston House) in Charleston. The seminar will be sponsored by the American College of Hospital Administrators and the West Virginia Hospital Association.

Program objectives will be to acquaint hospital managers with PSRO requirements, to review procedural steps necessary to develop effective in-hospital admission, utilization, and quality care review programs; to examine in-depth the implications of PSROs on internal hospital operations; and to review alternative means to control hospital costs.

Seminar topics will include "PSRO Legal Organizational Requirements," "Alternative Approaches for Compliance at Hospital Level," "Organization, Design and Operation of Admission, Utilization and Quality of Care Review Systems," "Impact of PSRO Requirements On Hospital," and "Meeting the Economic Challenge of PSRO Requirement Through Cost Containment."

For information, contact the West Virginia Hospital Research and Education Foundation, Inc., 1219 Virginia Street, East, Charleston 25301.

Registration will be limited to 35.

New officers of the West Virginia Chapter, American College of Surgeons, were elected during the Chapter's annual spring meeting at The Greenbrier, May 1-3. They are, from left, Drs. Alvin L. Watne, Morgantown, Secretary-Treasurer; Angelo S. Daniel, Wheeling, Immediate Past President; William E. Gilmore, Parkersburg, Governor; Alfred D. Ghaphery, Wheeling, First Vice President; and William E. Lawton, Jr., Charleston, President. Not shown is Dr. Robert J. Gardner, Morgantown, Second Vice President. The spring meeting was held conjointly with the Indiana Chapter, ACS. The fall meeting of the West Virginia Chapter, ACS, will be held in Morgantown, November 7 and 8.

Doctor Spock To Speak At WVU Seminar On Healthy Infant

Dr. Benjamin Spock, noted physician, author and lecturer, will be the keynote speaker at a symposium on the care of the healthy infant to be held on June 13-14 at the Ramada Inn in Morgantown.

The program will be sponsored by the Pediatric Nurse Associates of West Virginia in cooperation with the West Virginia Regional Medical Program, the WVU School of Nursing and the School of Medicine's Department of Pediatrics. It will stress new trends and current practices.

Doctor Spock will discuss "Perspectives on Well Child Care," at 8:45 A. M., June 13, following registration and a welcome by Dr. Lorita Jenab, Dean of the School of Nursing.

Other visiting speakers that day and their subjects will include: Marian Lake, RN, Head Nurse, labor and delivery, Cincinnati General Hospital, "The Role of the Nurse in the Delivery Room;" Dr. Thomas K. Oliver, Chairman and Professor of Pediatrics and Medical Director, Children's Hospital, Pittsburgh, "Thermal Regulation of the Newborn;" Dr. John B. Reinhard, Professor of Psychiatry and Pediatrics, University of Pittsburgh, "Early Identification and Prevention of Maternal-Child Dysfunction;" Sharon Elsass, BSN, Pediatric Nurse Associate, College of Medicine, University of Cincinnati, "Infant Stimulation;" Dr. Albert Esch, Medical Director, Consumer Product Safety Commission, Washington, D. C., "Safe Products for Babies."

Visiting speakers on June 14 will be Betty Countryman, member of the Board of Directors and Director of Professional Relations, LaLeche League International; and Assistant Professor, Indiana University School of Nursing, "The Advantages and Art of Breastfeeding;" Dr. L. Jack Filer, Jr., Professor of Pediatrics, University of Iowa, "Current Trends in Infant Feeding;" Dr. Raymond Bowman, Senior Nutritionist, Research and Development, H. J. Heinz Company, "Contributions of Commercial Foods to an Infant's Diet;" Sylvia Coleman, Morgantown Pediatric Nurse Associate, "Common Feeding Problems."

WVU faculty members who will participate are: Dr. Patricia Self, Assistant Professor of Psychology, "Clinical and Research Usage of the Brazelton Neonatal Assessment Scale;" Dr. Herbert Pomerance, Professor of Pediatrics, Charleston Division, WVU Medical Center, and Director of Pediatrics, Charleston Area Medical Center; Dr. Kenneth L. Wible, Assistant Professor of Pediatrics, and Co-Director, PNA program; Dr. William G. Klingberg, Chairman and Professor of Pediatrics; Dr. Charles A. White, Professor and Chairman, Department of Obstetrics and Gynecology, "Intrauterine Malnutrition," and Dr. George Khoury, Professor of Pediatrics, "Atherosclerosis: Onset in Infancy?"

The American Academy of Family Physicians will give Category 1 Credit for participation.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

June 2-4—Am. Neurological Assn., New York City.

June 14-19—AMA Annual Meeting, Atlantic City.

June 21—W. Va. State Society of Anesthesiologists, Morgantown.

June 23-26—Am. Orthopaedic Assn., Hot Springs, Va.

Aug. 8-10—Am. Academy of Clinical Toxicology, Kansas City, Mo.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 21-24—Am. Assn. of Electromyography and Electrodiagnosis, Rochester, Minn.

Sept. 21-25—Am. Acad. of Ophth. & Otol., Dallas.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 24-28—Am. Acad. for Cerebral Palsy, New Orleans.

Sept. 25-26—Med. Society of D. C., Washington, D. C.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Sept. 30-Oct. 3—Am. Roentgen Ray Society, Atlanta.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 23-26—Med. Society of Virginia, Roanoke.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

1976

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

April 9-11—W. Va. Chapter, AAFP, Charleston.

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WVU Medical Center
—News—

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

NEARLY half of West Virginia University School of Medicine's Class of 1975 will spend their first postgraduate year in West Virginia.

Forty from the class of 78 men and four women who graduated in medicine at WVU May 18 will remain in th state, 20 of them at University Hospital and 20 of them at various other West Virginia hospitals or locations.

The figures even better last year's, when more than one-third of the 77 WVU-educated new physicians stayed in West Virginia for their internship or first year of residency.

Compared to just two in the Class of 1973 and 12 in the Class of 1974, 17 members of this year's class chose the field of family practice.

The other types of postgraduate programs chosen and the number in each are: medicine (24), surgery (14), psychiatry (7), flexible and obstetrics/gynecology (5 each), pediatrics and radiology (3 each), pathology (2), and neurology and ophthalmology (1 each).

Fifty of the 59 class members who participated in the National Intern and Resident Matching Program's computerized system that pairs senior medical students and hospitals according to the choices of both received their first or second choice (43 first and 7 seconds).

Members of the Class of 1975, their home towns, and their locations after July 1 are:

Daniel B. Alt, Petersburg, University of Louisville (Ky.) Affiliated Hospital; Robert B. Altmeyer, Wheeling, Akron (Ohio) General Hospital; Roger W. Anderson, Elko, Nev., Akron (Ohio) City Hospital; William E. Bannen, Dayton, Ohio, Saint Elizabeth Hospital, Dayton; William P. Blocker, Parkersburg, Mount Carmel Hospital, Columbus, Ohio; Ernest J. Bonitatibus, McMechen, Wheeling Hospital; Timothy A. Brown, Clarksburg, North Carolina Baptist Hospital, Winston-Salem; Marshall L. Burke, Hurricane, North Carolina Memorial Hospital, Chapel Hill.

Gregory S. Carter, Morgantown, WVU Department of Neurology; David R. Chapman, Keyser, and Thomas S. Clark, Bluefield, WVU Department of Family Pracice; William B. Cline, Core, Edward J. Meyer Memorial Hospital, Buffalo, N. Y.; Terrell L. Coffield, New Martinsville, Akron (Ohio) General Hospital; Thomas A. Csencsitz, Morgantown, Orange Memorial Hospital, Orlando, Fla.; James M. Dauphin, Vienna, University of Louisville (Ky.) Affiliated Hospital; Benjamin M. Edwards, St. Albans, Charleston Memorial Hospital; Alan V. Fisher, Pt. Pleasant, Akron (Ohio) City Hospital.

Albert B. C. Fleming, II, Grantsville, USAF Medical Center, Keesler AFB, Miss.; Paul W. Gerke, South Charleston, Charleston Area Medical Center; Ruby A. Grimm, Vienna, North Carolina Baptist Hospital, Winston-Salem; Charles H. Hagan, Jr., Huntington, Harrisburg (Pa.) Polyclinic Hospital; Michael L. Halstead, Webster Springs, Eisenhower Medical Center, Augusta, Ga.; Bernard J. Imrich, Bobtown, Pa., WVU Department of Behavioral Medicine and Psychiatry; Joe N. Jarrett, Jr., Oak Hill, Charleston Area Medical Center; Thomas W. Jernigan, Charleston, Akron (Ohio) City Hospital; David G. Johnson, Parkersburg, U. S. Naval Hospital, Portsmouth, Va.

Robert D. Johnson, St. Albans, Akron (Ohio) General Hospital; Bradley K. Joseph, Wheeling, Highland General Hospital, Oakland, Calif.; Michael V. Keefe, Weirton, and Michael R. Kimbrell, Caledonia, N. D., Charleston Area Medical Center; Samuel R. Lehman, Lordsburg, N. M., R. E. Thomason General Hospital, El Paso, Tex.; Sidney C. Lerfald, Buxton, N. D., WVU Department of Behavioral Medicine and Psychiatry; Stephen A. Lewis, Charleston, Medical College of Virginia, Richmond; Michael J. Little, Fairmont, Naval Regional Medical Center, Oakland, Calif.; Phillip P. Luchini, Beckley, University of Colorado Affiliated Hospitals, Denver.

David A. Lynch, Morgantown, Temple University Hospital, Philadelphia, Pa.; Jack M. Matheny, Clendenin, WVU Department of Behavioral Medicine and Psychiatry; Ronald K. Mayfield, Morgantown, Charleston Area Medical Center; Alden G. McBee, Morgantown, Presbyterian University Hospital, Pittsburgh, Pa.; Mark W. McCormick, Greensburg, Pa., Magee Womens Hospital, Pittsburgh, Pa.; Samuel P. McNeill, Pt. Pleasant, WVU Department of Family Practice; John H. McWhorter, McWhorter, United Hospital Center, Clarksburg; Charles J.

Mirabile, Princeton, North Carolina Baptist Hospital, Winston-Salem; David G. Monson, Fargo, N. D., Charleston Area Medical Center.

Houston B. Moore, Jr., Lewisburg, Family Practice, Kingwood; David M. Morgan, Morgantown, National Naval Medical Center, Bethesda, Md.; Norma J. Mullins, Tioga, Baroness Erlanger Hospital, Chattanooga, Tenn.; David L. Namay, Charleston, WVU Department of Medicine; Timothy L. Newman, Lovelock, Nev., WVU Department of Family Practice; Dean J. Nickles, Wheeling, Madigan Army Medical Center, Tacoma, Wash.; Robert E. Norman, Jr., Wheeling, Akron (Ohio) City Hospital; Thompson E. Pearcy, Charleston, Charleston Area Medical Center; David L. Porter, Kenova, Womack Army Hospital, Fort Bragg, N. C.; Keith A. Recht, Weirton, Cleveland (Ohio) Clinic.

Robert W. Rectenwald, II, Charleston, and Louis Rishel, Morgantown, Charleston Area Medical Center; Samuel K. Roberts, Elkins, WVU Department of Family Practice; Howard I. Schiff, Whitestone, N. Y., Montefiore Hospital, New York; Georg C. Schultz, St. Paul, Minn., Children's Hospital of Akron, Ohio; Edmund C. Settle, South Charleston, and John P. D. Shemo, Wheeling, WVU Department of Behavioral Medicine and Psychiatry; John T. Slevin, Parkersburg, WVU Department of Medicine; David L. Sustarsic, Benwood, and Robert C. Thompson, Jr., Bridgeport, WVU Department of Surgery.

John W. Treharne, Jr., Philippi, Naval Regional Medical Center, Charleston, S. C.; Paul E. VanDyke, Wellsburg, WVU Department of Radiology; Gary L. Wagoner, Springfield, Kanawha Valley Family Practice Program; Harry E. Walkup, Jr., Worton, Md., Charlotte (N. C.) Memorial Hospital; Richard W. Ward, Wheeling, and Robert F. Webb, Weirton, Charleston Area Medical Center; Samuel E. Webster, Mullens, Southern Illinois University and Affiliated Hospitals, Springfield; James M. Wertman, Morgantown, WVU Department of Pediatrics; Curtis D. White, Nitro, Charleston Area Medical Center.

Janis P. White, Clarksburg, North Carolina Baptist Hospital, Winston-Salem; Joseph B. White, Martinsburg, Brooke Army Medical Center, Fort Sam Houston, Tex.; Patricia W. Williams, Bridgeport, WVU Department of Behavioral Medicine and Psychiatry; Paul P. Williams, Romney, Lancaster (Pa.) General Hospital; Danny R. Wills, Princeton, Charleston Area Medical Center; John J. Wurtzbacher, Wheeling, WVU Department of Medicine; Joel M. Zacks, Charleston, WVU Division of Ophthalmology; Robert J. Zaleski, Wheeling, and Stephen M. Zekan, Charleston, Charleston Area Medical Center.

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The Month in Washington

• From the Washington Office of the American Medical Association.

THE American Medical Association has introduced a new proposal for national health insurance into the U. S. Congress. Key lawmakers on both sides of the aisle in the House of Representatives are sponsors of the bill—HR 6222.

The AMA proposal is the only substantially new approach to national health insurance (NHI) presented so far in the 94th Congress. Called the Comprehensive Health Care Insurance Act, the bill was introduced into the House by Reps. Richard Fulton, (D-Tenn.); Tim Lee Carter, (R-Ky.); John Duncan, (R-Tenn.); and John Murphy, (D-N. Y.).

The AMA's NHI plan builds on the structure of the present system of employer-employee group health insurance plans, mandating each employer to provide comprehensive and catastrophic benefit coverage with the employer picking up at least 65 per cent of the cost. Employees would not be compelled to participate. The self-employed as well as the non-employed could purchase qualified private health insurance, through pools if needed, at a cost not more than 125 per cent of the cost of group plans. They would have all or part of the premium paid for by the federal government depending upon their income tax liability.

Small businesses that find the mandated plan an added financial burden would receive federal assistance.

Medicare beneficiaries could purchase supplemental insurance to bring Medicare benefits to a par with those offered elsewhere, with the government assisting people with limited resources. Medicaid would be eliminated under the program.

After a certain level of co-insurance is reached, depending upon income, insurance covers all remaining costs as a complete protection against catastrophic costs.

The co-insurance factor would deprive no one of needed care, sponsors said. The absolute maximum that any individual would have to pay would be $1,500; the absolute maximum for any family would be $2,000 in any given year.

'Evolution Of Thinking'

Fulton, a member of the House Ways and Means Committee, told the House that the bill "represents the evolution of the doctors' thinking on this complex subject; and it demonstrates that the continuing process of discussion and debate has influenced the doctors as, indeed it has influenced the thinking of Congress."

"We must build on the structure of group health insurance which is today providing sound basic coverage for a vast majority of Americans at no cost to the government," said Fulton. "It is easier to remedy whatever deficiencies exist in this mechanism than to junk it in favor of a new and elaborate government structure that would have to be created from scratch . . . it would also be considerably less traumatic for Americans to remain with a familiar system. . ."

Rep. John Duncan, third-ranking Republican on the House Ways and Means Committee, said in a House speech that "the AMA plan does the best job to date in identifying the line between national bankruptcy and national parsimony in expenditures for national health insurance.

"The doctors' plan provides assistance on the basis of need. The most help goes to those who need it most. The least help goes to those who need it the least."

He said the Comprehensive Health Care Insurance Act removes the fear of catastrophic illness that plagues even well-off Americans and provides sweeping regular benefits, including 365 days of inpatient hospital care, 100 days of skilled nursing care, full dental care for children, home health benefits and many other services including psychiatric treatment and well-baby care.

Rep. Tim Lee Carter, a physician-member of Congress and ranking minority member of the House Health Subcommittee, said the bill "retains a large measure of pluralism in the administration and financing . . . and it is precisely this pluralism —the creativity and sensitivity of the private sector, supplemented only where necessary by government—that has made the quality of American medicine hands-down the finest in the world."

Doctor Carter pointed to the cost control mechanism of "co-insurance" (except for the poor) in the physicians' plan. "There is incontestable evidence that any health care system without some regulatory control is soon bogged down by the 'worried-well'," he said.

Rep. John Murphy of New York, a member of the Commerce Committee, said, organized medicine's plan "does about what the federal government can

(Continued on Page xxi)

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R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

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Sheldan Widlan, M. D.

Internal Medicine:
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Albert M. Valentine, M. D.
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B. L. Van Pelt, M. D.

Psychiatry and Neurology:
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Stephen D. Ward, M. D.
Michael McNeer, M. D.
David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelson, Ed D.

Roentgenology:
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J. N. Aceta, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

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Joyce Cerra, P. A.
Joann Green, P. A.
John L. Hennessy, P. A.
Michael G. Simon, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

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Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

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James A. Gardner, M. D.

Orthopedics
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S. A. Zahir, M. D.
Mario C. Ramos, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
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Mariamma Abraham, M. D.

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Edward T. Liu, M. D.

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S. L. Bembalkar, M. D.

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R. G. D. Concepcion, M. D.

Ear, Nose & Throat
P. C. Carra, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Obituaries

JAMES D. BROWN, M. D.

Dr. James D. Brown of Romney, a family physician, died on April 15 in a hospital there. He was 66.

A native of Baltimore, Maryland, Doctor Brown graduated from West Virginia University and received his M. D. degree in 1934 from the Medical College of Virginia. He interned at Charleston General Hospital.

Doctor Brown, a veteran of World War II, was a member of the Potomac Valley Medical Society, the West Virginia State Medical Association, the American Medical Association and the American Academy of Family Physicians.

Survivors include three sons, James D. Brown, Jr., of Lubbock, Texas; William G. Brown, Boston, Massachusetts, and Stephen T. Brown, Sterling Park, Virginia; a daughter, E. Jane Saville, Augusta (Hampshire County); three brothers, Dr. Favius H. Brown, Jr., Summersville; Dr. William H. Brown, Sutton, and Dr. Robert R. Brown, Romney; and two sisters, Mrs. Elizabeth Ann Jacobson, Lewisburg, and Mrs. Alice Marie Juergens, Spencer.

* * *

WILLIAM B. DAVIS, M. D.

Dr. William B. Davis of Rainelle, a family physician, died on April 26 at his home there. He was 78. Doctor Davis practiced in Rainelle for 33 years.

A native of Mt. Carmel, Kentucky, Doctor Davis graduated from West Virginia University and received his M. D. degree in 1922 from the University of Louisville School of Medicine. After serving his internship at St. Anthony's Hospital in Louisville, he practiced in Princeton and Mullens before going to Rainelle. He retired last July.

Doctor Davis was a member of the Fayette County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; a daughter, Mrs. Nancy Altizer of Staunton, Virginia; three stepdaughters, Mrs. Patricia Boley, Sterling, Virginia; Mrs. Carol Famiglienhi, Clarksburg, New Jersey; and Debra Shinn, at home; a son, Dr. James K. Davis, Newport News, Virginia; and a sister, Mrs. Helen Johns, Lexington, Kentucky.

* * *

D. KEITH AUVIL, M. D.

Dr. D. Keith Auvil, a family physician in Parkersburg, died on April 15 in the emergency room of a hospital there after choking on a piece of meat. He was 45.

(Obituaries Continued on Page xviii)

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) Oral Suspension
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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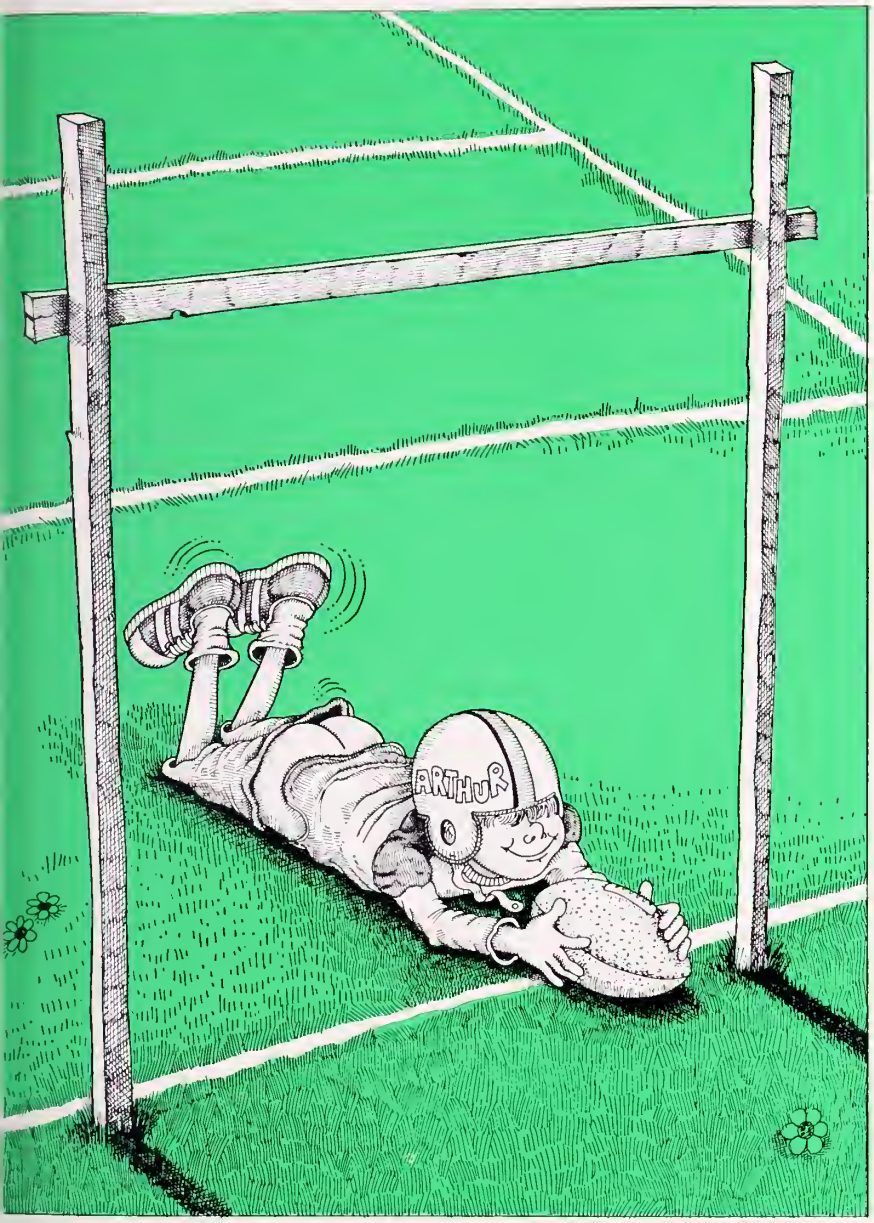

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(Obituaries Continued from Page xvi)

A native of Parsons, Doctor Auvil graduated from West Virginia University and received his M. D. degree in 1956 from the Medical College of Virginia. A veteran of World War II, he was a member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow, Dr. Loretta R. Auvil; two sons, Leman W. and James Auvil; three daughters, Athena, Corinthia and Leda Auvil; and his mother.

Economic Benefits Realized From Water Fluoridation

America's dental bill last year was an astronomical four billion dollars. Not included in this amount is the economic loss from more than 100 million man work hours lost because of dental ills. Unless comprehensive protective measures and preventive programs are instituted to check the rising trend of dental disease, it appears that the cost for dental care and the number of manpower hours lost will continue to grow larger each year.

One of the most profitable ways to meet this problem is an investment in water fluoridation, according to a recent issue of *State of the State's Health*, prepared by Dr. N. H. Dyer, Director of the West Virginia State Department of Health.

County Societies

CABELL

The Cabell County Medical Society met on April 10 at the Gateway Inn in Huntington.

Correspondence received regarding the establishment of a state-wide registry for renal disease was discussed.

Dr. Robert C. Parlett, Vice President of Health Sciences and Dean of the Marshall University Medical School, discussed the visit of an AMA accreditation team to the medical school which was scheduled for April 15.

It was announced that the scientific programs of the Society meetings could be counted toward Category 1 of the AMA's Physician's Recognition Award.

The scientific speaker, Doctor Kurtzman, gave a lively discussion on the topic of hypertension.—Colin M. Craythorne, M. D., Secretary.

* * *

HARRISON

(*Editor's Note:* Following is a summary of the *President's Report*, dated May 1, 1975, by Dr. Mehmet V. Kalaycioglu, President of the Harrison County Medical Society.)

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Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

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Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology
Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

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Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

Highlights of the past 12 months include:

Two new physicians were added to the medical community through the Family Practice residency program at the United Hospital Center in Clarksburg. A projected total of 12 residents will be coming to us and we are expecting a majority of them to stay in the community. We are grateful to Drs. L. Dale Simmons and Robert D. Hess for the work they have done, in cooperation with United Hospital Center, in obtaining approval of the program.

As a result of the efforts of the Recruitment Committee, six new physicians are now practicing in Harrison County and have joined this Society.

During the past year, in cooperation with the League for Service, the In-As-Much Mothers Clinic has been held twice a month. Dr. Charles S. Harrison has operated the Clinic and sees an average of 15 to 20 expectant mothers a month. The In-As-Much Baby Clinic is held once a week and Dr. Robert A. Marks sees an average of 20 to 40 infants.

With the cooperation of the State Health Department, Dr. Phillip W. Hall and Dr. Robert T. Humphries have conducted Crippled Children's Clinics once a month, seeing between 40 and 80 children in a month's time. Family Planning Clinics were conducted twice a month by Dr. M. Saeed Mahmoodian, who counseled from 15 to 20 patients at a time.

County high school football players have been examined before participating in football practice by one of our members without compensation.

Eighty-five per cent of our members have attended our monthly continuing education programs, thereby receiving continuing education credit from the American Medical Association and the American Academy of Family Physicians.

The Student Loan Fund currently is sponsoring three scholarships. We are very proud that the Auxiliary has contributed $1,613 to the AMA-ERF Medical Student Loan Program.—Mehmet V. Kalaycioglu, M. D., President.

* * *

McDOWELL

The McDowell County Medical Society met on April 9 at Doctor's Memorial Hospital in Welch.

Dr. John H. Murry discussed the Mercer County Health Center's proposal for standards for primary care in West Virginia, second draft of March, 1975. The Society voted to refer the proposal to the Council of the State Medical Association.

The speaker for the evening was Doctor Heydinger of Lexington, Kentucky, who is associated with the Appalachian Hospitals. Doctor Heydinger discussed the interference of government in the practice of medicine, and urged physicians to tell legislators what they need and want. The Society voted to forward this recommendation to the Council of the State Medical Association.—Joseph C. Ray, M. D., Acting Secretary.

(County Societies Continued Next Page)

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Prabhand Chinuntdet	Madison	Harold H. Howell	Madison	3rd Wed.
Brooke	(No President Elected for 1975)		James E. Wise	Fallansbee	
Cabell	Gerald E. Vanston	Huntington	Colin M. Craytharne	Huntington	2nd Thurs.
Central West Virginia	I. Frank Hartman, II	Buckhannon	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fogle	Martinsburg	2nd Wed.
Fayette	Joe N. Jarrett	Oak Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pope	White Sul. Spgs.	T. O. Dotson	White Sul. Spgs.	2nd Wed.
Hancock	Irwin M. Bogorad	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Mehmet V. Kalayciaglu	Shinnston	Julian D. Gasataya	Lumberport	1st Thurs.
Kanawha	George A. Shawkey	Charleston	Richard C. Rashid	So. Charleston	2nd Tues.
Logan	Jorge J. San Pedro	Man	Enrico V. Rollos	Man	2nd Wed.
Marion	Robert G. Jones	Fairmont	Mary Jordon	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dolgovskij	Glen Dale	3rd Tues.
Mason	Antonio G. Sola	Pt. Pleasant	Young Choi	Pt. Pleasant	4th Tues.
McDowell	Romulo Miranda	Welch	A. A. Carr	Welch	2nd Wed.
Mercer	James P. Thomas	Bluefield	John J. Mahood	Bluefield	3rd Mon.
Mingo	Robert J. Tchou	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	Herbert E. Warden	Morgantown	H. Summers Harrison	Morgantown	1st Tues.
Ohio	Alfred D. Gaghery	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	Frederick D. Gillespie	Parkersburg	R. C. Cowan, Jr.	Parkersburg	1st Thurs.
Potomac Valley	Esteban Friera	Romney	Dewey F. Bensenhaver	Petersburg	2nd Wed.
Preston	Wm. H. Harriman, Jr.	Terra Alta	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Roy James Yates	Beckley	Stephen T. J. Lee	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hinton	3rd Mon.
Tyger's Valley	Elvin G. Kreider	Philippi	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemoyne Coffield	New Martinsville	C. P. Watson	New Martinsville	Monthly
Wyoming	Frank J. Zsoldos	Mullens	George F. Fordham	Mullens	Quarterly

(County Societies Continued from Page xix)

MERCER

The Mercer County Medical Society met on April 21 at the University Club in Bluefield. The speaker for the scientific program was Dr. R. C. McAllister of the Department of Internal Medicine, University of Kentucky College of Medicine.

Doctor McAllister gave a very interesting talk on hypertension with slides. He stated that hypertension is very common and that the risk of atherosclerosis and stroke is much greater in the hypertensive. He emphasized that cerebral blood flow is increased if the systolic blood pressure is decreased below 160, and also stated that the old measure of normal blood pressure is not true in today's medicine.—John J. Mahood, M. D., Secretary.

* * *

MONONGALIA

The Monongalia Medical Society met on April 1 at the Hotel Morgan in Morgantown. The scientific program was presented by Dr. Charles A. White, Jr., Professor and Chairman of the Department of Obstetrics and Gynecology at the West Virginia University Medical Center. His topic was "The High-Risk Obstetrical Patient."

A letter from Drs. E. Schrae LaPlante of Morgantown and Mary Lou Lewis of Charleston regarding the establishment of a statewide registry for renal disease was read.—H. Summers Harrison, M. D., Secretary.

Book Reviews

CURRENT THERAPY OF ALLERGY—By Claude A. Frazier, M. D., Chief of Allergy, Memorial Mission Hospital, Asheville, N. C. Medical Examination Publishing Co., Inc., Flushing, N. Y. 1st Edition. 1974. 298 Pages. Price $10.

Books on allergy research, diagnosis and therapy appear to have been no more nor less numerous than publications in other specialized fields. An anthology of treatment of most allergic conditions has been compiled by C. A. Frazier, Jr., M. D., son of Claude A. Frazier, Sr., M. D., of Huntington, and nephew of Ralph Frazier, M. D., of Fayetteville, to whom the book is dedicated.

The subject is dealt with in 29 chapters, each treating a single topic. For each condition, the treatments recommended by several different contributors are outlined. For example, under dermatitis of the hands, detailed descriptions of treatment are given by Drs. Alexander A. Fisher and G. L. Waldbott. The treatment of acute and chronic urticaria is described by Dr. William R. Solomon, Dr. Frank G. Simon, Dr. Jonathan Forman, and Dr. Joseph W. Noah, etc.

Among the nearly 100 contributors are 53 professors, more than 15 directors and chiefs of services, and 21 physicians in private practice. These physicians are stationed at 36 medical schools, at least two major medical centers, and 13 major hos-

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Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

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E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
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CHARLES S. FLYNN, M. D.
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C. D. PRUETT, M. D.
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NUCLEAR MEDICINE
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R. O. ROGERS, M. D.

PATHOLOGY
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JOHN J. BRYAN, M. D.

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GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

pitals. Twelve or more of the contributors are physicians in private practice; faculties of three medical schools in Canada and one in Tel Aviv are represented.

Specialties represented among the contributors include anesthesiology, pediatrics, dermatology, ophthalmology and surgery in addition to the various sub-specialties of internal medicine.

This collection of treatments by such a diverse group of physicians provides a spectrum which may be unequaled by any other publication. It has not been possible to read in detail every part of the book, but the sections that I have read are extremely well-written and, for the most part, quite comprehensive.

Certainly, one can have no hesitation in recommending this book to any physician as an aid in treating most types of allergy; and it should be especially valuable in the hands of most family physicians.—Joe N. Jarrett, M. D.

THE MONTH IN WASHINGTON

(Continued from Page xiv)

afford to do at this particular time. It will not be legislation that over-promises and under-performs."

The lawmaker denied "that any form of national health insurance is preferable to what we have. The right kind of program can accomplish much; the wrong kind could actually do harm."

"The need is immediate," declared Murphy. "Because the program utilizes the existing structure of the private insurance industry, there can be a fast start-up. There will be a minimum of administrative costs and bureaucratic delays.

"This is the place to start: a sound foundation of comprehensive health services, available to all Americans, and at a reasonable cost."

AMA Favors States Handling Malpractice

The AMA has told Congress that federal legislative remedies for the professional liability crisis could create a worse situation and in some cases result in even higher liability costs.

Testifying before the Senate Health Subcommittee headed by Sen. Edward Kennedy (D-Mass.) as it opened hearings on the liability issue, AMA President Malcolm C. Todd, M. D., declared "it is far wiser for states to enact varied innovative legislative responses to the problem than to have an untested and unproved scheme enacted on a nationwide basis by the federal government, particularly where such proposals contain elaborate provisions for federal government regulation of the practice of medicine."

Doctor Todd, accompanied by Richard E. Palmer, M. D., Chairman of the AMA Board of Trustees, said there's no question a crisis exists in medical liability insurance. "The complexity of the problem, and its varied causes convince us, however, there is no single solution, be it arbitration, 'no-fault,' or anything else."

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In patients with chronic or frequently recurrent urinary tract infections

Bactrim™ outperforms ampicillin.

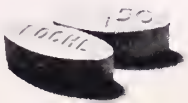
In new multicenter studies a higher percentage of Bactrim-treated patients maintained clear cultures for four, six and eight weeks.

See charts on following page for details of studies.

For chronic cystitis or pyelonephritis evidenced by persistent bacteriuria, frequently recurrent infections or infections associated with urinary tract complications, when infection is due to susceptible organisms.

Bactrim™

(80 mg trimethoprim/400 mg sulfamethoxazole)



Before prescribing, please consult complete product information, a summary of which follows:
INDICATIONS: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii*.

Note: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections.
The recommended quantitative disc susceptibility method (*Federal Register 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy, "Intermediate susceptibility" also indicates a likely response and "Resistant" that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. Data are insufficient to recommend use in infants and children under 12.

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

DOSAGE: Not recommended for children under 12.
Usual adult dosage: 2 tablets b.i.d. for 10 to 14 days.
For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	2 tablets every 24 hours
Below 15	Use not recommended

Supplied: Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

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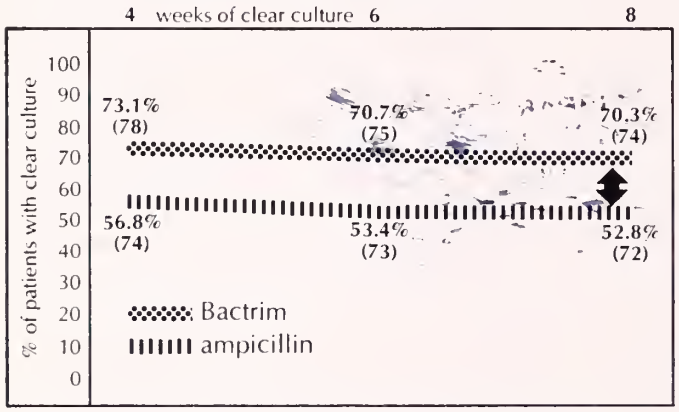
In new multicenter studies of patients with chronic or frequently recurrent urinary tract infections

Bactrim™

(80 mg trimethoprim/400 mg sulfamethoxazole)

outperforms ampicillin

Bactrim vs ampicillin. 10-day therapy. 157 patients.



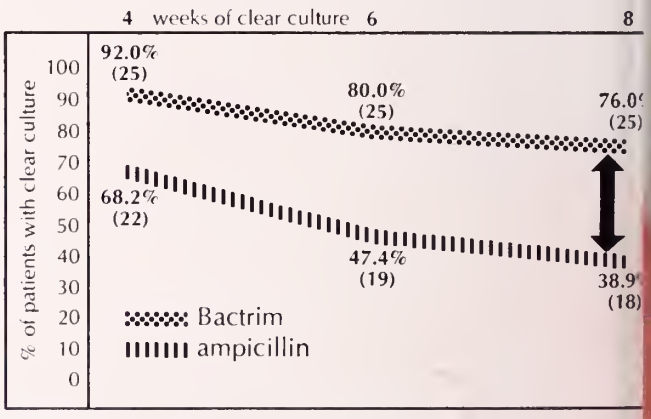
Criterion for clear culture: 1000 or fewer organisms/ml of urine.
Numbers in parentheses: No. of patients evaluated for this time period.

17.5% The Bactrim plus.

Patients maintaining clear cultures for 8 weeks

Bactrim: 70.3%
ampicillin: 52.8%

Bactrim vs ampicillin. 28-day therapy.* 53 patients.



Criterion for clear culture: 1000 or fewer organisms/ml of urine.
Numbers in parentheses: No. of patients evaluated for this time period

37.1% The Bactrim plus.

Patients maintaining clear cultures for 8 weeks

Bactrim: 76.0%
ampicillin: 38.9%

In two multiclinic, double-blind studies of patients with chronic or frequently recurrent urinary tract infections, Bactrim maintained a higher rate of clear cultures than ampicillin. All patients had "significant bacteriuria" (100,000 or more organisms/ml of urine) on two consecutive pretreatment cultures; many had previously undergone multiple treatment programs and/or surgery. Organisms were *E. coli* and *Proteus mirabilis*.

Side effects were relatively mild (e.g., nausea, vomiting, rash), but more serious side effects can occur with the agents studied. Please consult the manufacturers' product information for all warnings, precautions, contraindications and adverse reactions.

*While the usual therapy regimen for Bactrim is 10 to 14 days, patients with chronic urinary tract infections can be and are treated for substantially longer periods with standard agents such as ampicillin. These studies, therefore, include both 10-day and 28-day courses of therapy. In both studies dosage was one 500-mg ampicillin capsule q.i.d. or two Bactrim tablets b.i.d. plus placebos to make each drug regimen appear identical.

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Please see preceding page for summary of product information.

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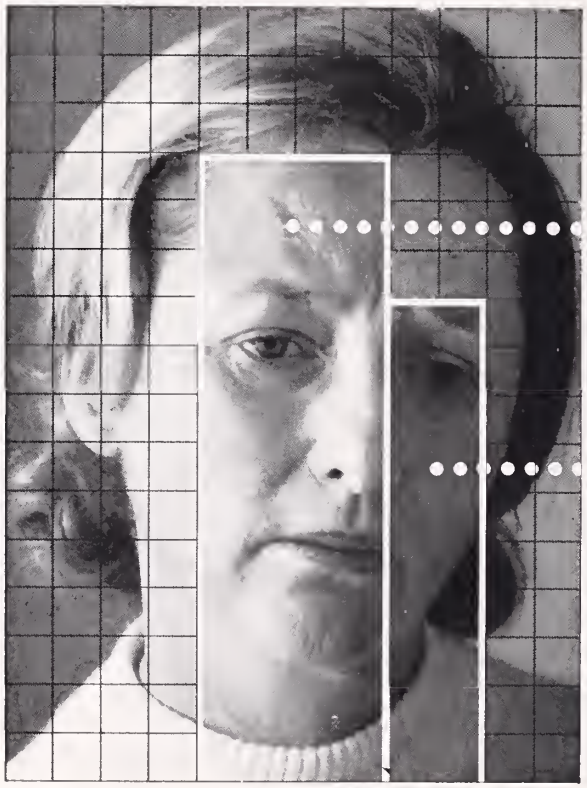

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in and/or severity of grand mal se require increased dosage of sta convulsant medication; abrupt may be associated with tempora crease in frequency and/or seve seizures. Advise against simulta gestion of alcohol and other CN sants. Withdrawal symptoms (si those with barbiturates and alco occurred following abrupt disco (convulsions, tremor, abdomina cle cramps, vomiting and sweat addiction-prone individuals und

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Valium (diazepam)
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two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

For further information on this subject, the following references are provided:

1. Henry BW, *et al: Dis Nerv Syst 30*:675-679, Oct 1969.
2. Hollister LE, *et al: Arch Gen Psychiatry 24*:273-278, Mar 1971.
3. Claghorn J: *Psychosomatics 11*:438-441, Sept-Oct 1970.

Valium® (diazepam)

2-mg, 5-mg, 10-mg tablets

in psychoneurotic anxiety states with associated depressive symptoms

e because of their predisposi-
tuation and dependence. In
lactation or women of child-
e, weigh potential benefit
sible hazard.

s: If combined with other psy-
or anticonvulsants, consider
ıarmacology of agents em-
gs such as phenothiazines,
ɔarbiturates, MAO inhibitors
ntidepressants may potentiate
lsual precautions indicated in
verely depressed, or with latent
or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Nutley, New Jersey 07110

JULY
1975

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The MUDRANES

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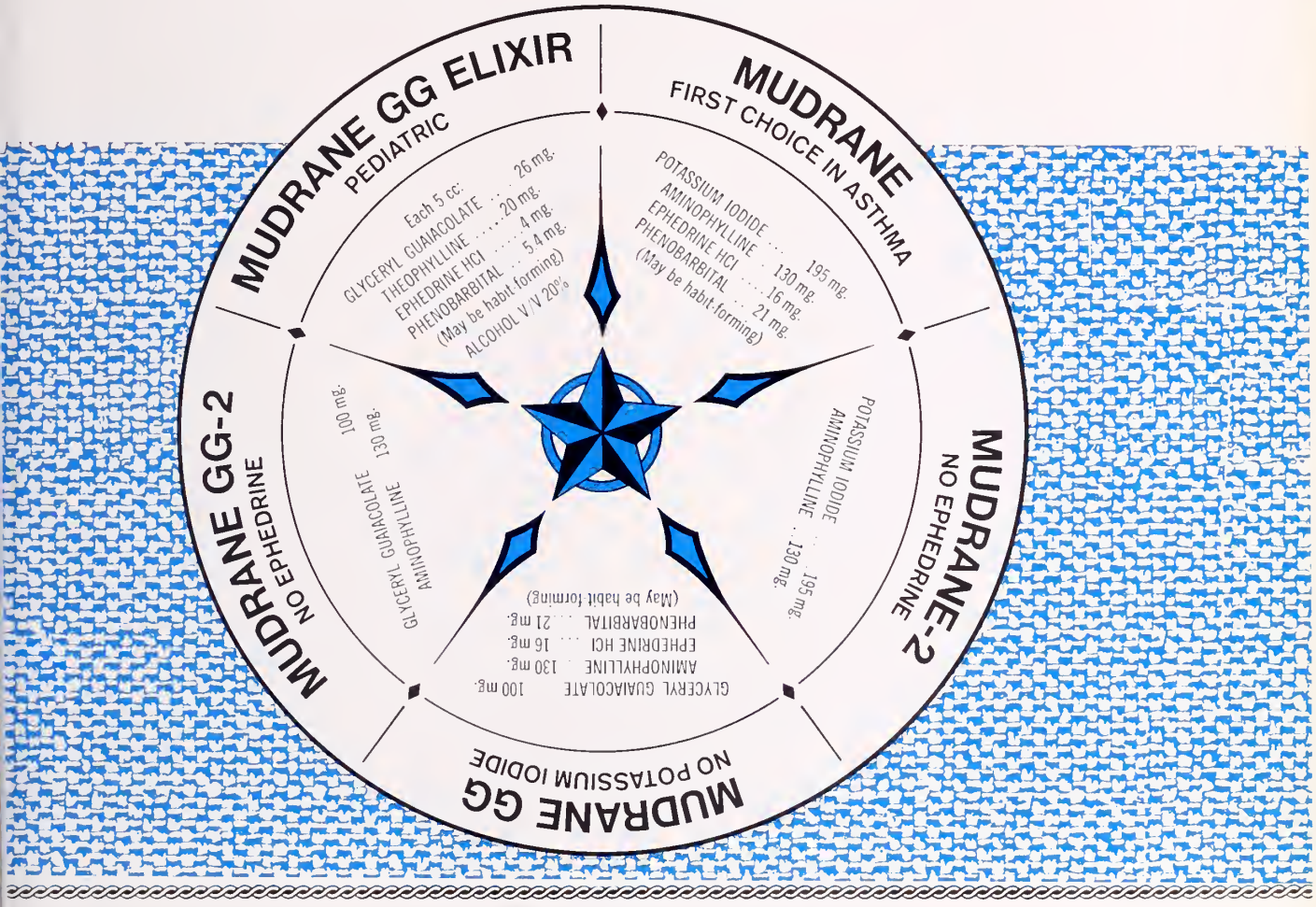

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the weight of scientific opinion:

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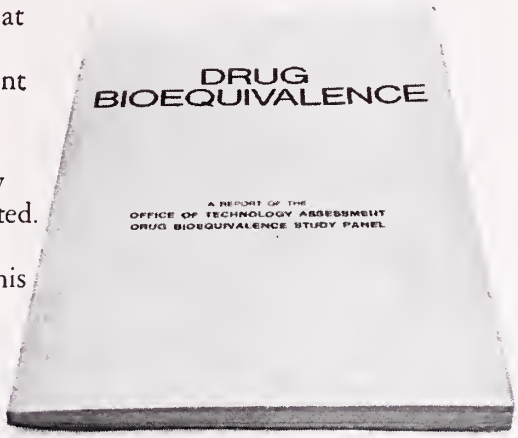
Definitely not, unless bioequivalence tests and other quality assurance checks had been conducted. The pharmaceutical industry and many scientists have maintained this position for years, but others have questioned it. Now the Office of Technology Assessment of the Congress of the United States has reported on the issue in its Drug Bioequivalence Study.*

Here are a few definitive statements in the O.T.A. report:

"...the problem of bioinequivalency in chemically equivalent products is a real one. Since the studies in which lack of bioequivalence was demonstrated involved marketed products that met current compendial standards, these documented instances constitute unequivocal evidence that neither the present standards for testing the finished product nor the specifications for materials, manufacturing process, and controls are adequate to ensure that ostensibly equivalent drug products are, in fact, equivalent in bioavailability.



"While these therapeutic failures resulting from problems of bioavailability were recognized and well documented, it is entirely possible that other therapeutic failures and/or instances of toxicity that had a similar basis have escaped attention."

The Pharmaceutical Manufacturers Association supports federal legislative amendments that would require manufacturers of duplicate prescription pharmaceutical products, subject to new drug procedures, to document:

(a) chemical equivalence; and (b) biological equivalence, where bioavailability test methods have been validated as a reliable means of assuring clinical equivalence; or (c) where such validation is not possible, therapeutic equivalence.

In addition, the PMA supports federal legislation that would require certification of all manufacturers of prescription products before they could start in business, annual inspections and certification thereafter, and strict adherence to FDA regulations on good manufacturing practices.

The overall quality of the United States drug supply is excellent. But only a total quality assurance program, envisaged in these and other policy positions adopted by the PMA Board of Directors in 1974, can bring about acceptable levels of performance by all prescription drug manufacturers and thereby assure the integrity of your prescription...

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*Copies of the complete report on Drug Bioequivalence may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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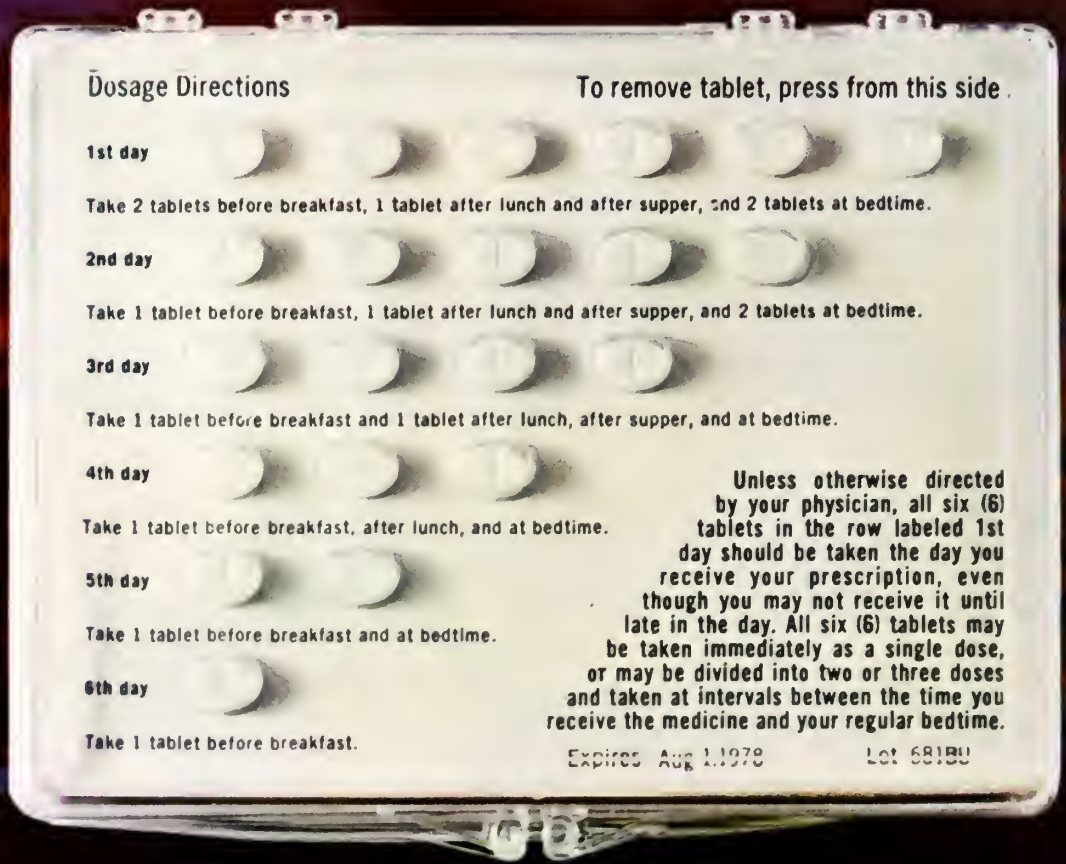

The explicit printed dosage instructions that accompany each Dosepak make it easy for the patient to understand and follow the dosage regimen.

Poison ivy and other severe allergic states intractable to adequate trials of conventional treatment will often respond to a short, intensive, adjunctive course of Medrol.

Medrol Dosepak is designed to provide a tapered, six-day course of methylprednisolone tablets.

On occasion, a six-day course of Medrol therapy may not be sufficient and therapy may need to be extended. If there is continued contact with the sensitizing agent, corticosteroids will not completely suppress the inflammatory response. A further caution: If lesions become infected during Medrol therapy, it should be remembered that steroids may decrease resistance to infection and hinder the body's ability to localize an infection.

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DESCRIPTION AND ACTIONS: Medrol (methylprednisolone) is a synthetic glucocorticoid with potent anti-inflammatory effects It is readily absorbed from the GI tract. Glucocorticoids cause profound and varied metabolic effects and modify the body's immune responses to diverse stimuli.

INDICATIONS: 1 **Endocrine Disorders:** Primary or secondary adrenocortical insufficiency (hydrocortisone or cortisone is the first choice; synthetic analogs may be used in conjunction with mineralocorticoids where applicable, in infancy, mineralocorticoid supplementation is of particular importance). Congenital adrenal hyperplasia, nonsuppurative thyroiditis; hypercalcemia associated with cancer. 2 **Rheumatic Disorders:** As adjunctive therapy for short-term administration (to tide the patient over an acute episode or exacerbation) in psoriatic arthritis; rheumatoid arthritis (selected cases may require low-dose maintenance therapy), ankylosing spondylitis, acute and subacute bursitis, acute nonspecific tenosynovitis, acute gouty arthritis. 3 **Collagen Diseases:** During an exacerbation or as maintenance therapy in selected cases of—Systemic lupus erythematosus, acute rheumatic carditis 4 **Dermatologic Diseases:** Pemphigus, bullous dermatitis herpetiformis, severe erythema multiforme (Stevens-Johnson syndrome), exfoliative dermatitis, mycosis fungoides; severe psoriasis 5 **Allergic States:** Control of severe or incapacitating allergic conditions intractable to adequate trials of conventional treatment Seasonal or perennial allergic rhinitis, bronchial asthma, contact dermatitis, atopic dermatitis; serum sickness 6 **Ophthalmic Diseases:** Severe acute and chronic allergic and inflammatory processes involving the eye and its adnexa such as—allergic corneal marginal ulcers, herpes zoster ophthalmicus, anterior segment inflammation, diffuse posterior uveitis and choroiditis; sympathetic ophthalmia, allergic conjunctivitis, keratitis; chorioretinitis; optic neuritis; iritis and iridocyclitis 7 **Respiratory Diseases:** Symptomatic sarcoidosis; Loeffler's syndrome not manageable by other means, berylliosis; fulminating or disseminated pulmonary tuberculosis when concurrently accompanied by appropriate antituberculous chemotherapy 8 **Hematologic Disorders:** Idiopathic and secondary thrombocytopenia in adults, acquired (autoimmune) hemolytic anemia, erythroblastopenia (RBC anemia), congenital (erythroid) hyperplastic anemia 9 **Neoplastic Diseases:** For palliative management of leukemias and lymphomas in adults; acute leukemia of childhood. 10 **Edematous States:** To induce a diuresis or remission of proteinuria in the nephrotic syndrome, without uremia, of the idiopathic type or that due to lupus erythematosus 11 **Miscellaneous:** Tuberculous meningitis with subarachnoid block or impending block when concurrently accompanied by appropriate antituberculous chemotherapy Systemic dermatomyositis (polymyositis)

CONTRAINDICATIONS: Systemic fungal infections

WARNINGS: In patients on corticosteroid therapy subjected to unusual stress, increased dosage of rapidly acting corticosteroids before, during, and after the stressful situation is indicated

Corticosteroids may mask some signs of infection and new infections may appear during their use There may also be decreased resistance and inability to localize infection Prolonged use may enhance the establishment of secondary ocular infections due to fungi or viruses

Since adequate human reproductive studies have not been done, the use in pregnancy, nursing mothers or women of childbearing potential requires that the possible benefits be weighed against the potential hazards to the mother and the embryo or fetus Infants should be observed for signs of hypoadrenalism.

Average and large doses of hydrocortisone or cortisone can cause elevation of blood pressure, salt and water retention, and increased excretion of potassium These effects are less likely to occur with the synthetic derivatives except when used in large doses. Dietary salt restriction and potassium supplementation may be necessary All corticosteroids increase calcium excretion.

While on corticosteroid therapy, patients should not be vaccinated against smallpox. Other immunization procedures should not be undertaken in patients who are on corticosteroids, especially on high dose, because of possible hazards of neurological complications and a lack of antibody response.

The use of corticosteroids in active tuberculosis should be restricted to those cases of fulminating or disseminated tuberculosis in which the corticosteroid is used for the management of the disease in conjunction with an appropriate antituberculous regimen.

If corticosteroids are indicated in patients with latent tuberculosis or tuberculin reactivity, close observation is necessary as reactivation of the disease may occur During prolonged corticosteroid therapy, these patients should receive chemoprophylaxis

PRECAUTIONS: Hormone therapy is an adjunct to, and not a replacement for, conventional therapy

Dosage should be individualized according to the severity of the disease and the response of the patient. As soon as a satisfactory clinical response is obtained, the daily dose should be reduced, either to termination of treatment or to the minimal effective maintenance dose level The lowest possible dose should be used and when reduction in dosage is possible, the reduction should be gradual If the drug has been administered for more than a few days If a period of spontaneous remission occurs in a chronic condition, treatment should be discontinued.

Drug-induced secondary adrenocortical insufficiency may be minimized by gradual reduction of dosage This type of relative insufficiency may persist for months after discontinuation of therapy; therefore, in any situation of stress occurring during that period, hormone therapy should be reinstituted. Since mineralocorticoid secretion may be impaired, salt and/or a mineralocorticoid should be administered concurrently

There is an enhanced effect of corticosteroids on patients with hypothyroidism and in those with cirrhosis

Corticosteroids should be used cautiously in patients with ocular herpes simplex because of possible corneal perforation.

Psychic derangements may appear or existing emotional instability or psychotic tendencies may be aggravated by corticosteroids.

Aspirin should be used cautiously in conjunction with corticosteroids in hypoprothrombinemia..

Steroids should be used with caution in nonspecific ulcerative colitis, if there is a probability of impending perforation, abscess or other pyogenic infection, diverticulitis, fresh intestinal anastomoses, active or latent peptic ulcer, renal insufficiency; hypertension, osteoporosis, and myasthenia gravis.

Growth and development of infants and children on prolonged corticosteroid therapy should be carefully observed.

Blood pressure, body weight, routine laboratory studies, including 2-hour postprandial blood glucose and serum potassium, and a chest X-ray should be obtained at regular intervals during prolonged therapy. Upper GI X-rays are desirable in patients with known or suspected peptic ulcer disease.

ADVERSE REACTIONS: Fluid and Electrolyte Disturbances. Sodium retention, fluid retention, congestive heart failure in susceptible patients, potassium loss; hypokalemic alkalosis, hypertension. **Musculoskeletal.** Muscle weakness, steroid myopathy, loss of muscle mass, osteoporosis; vertebral compression fractures; aseptic necrosis of femoral and humeral heads; pathologic fracture of long bones **Gastrointestinal**. Peptic ulcer with possible perforation and hemorrhage, pancreatitis, abdominal distention, ulcerative esophagitis **Dermatologic.** Impaired wound healing, thin fragile skin, petechiae and ecchymoses, facial erythema, increased sweating May suppress reactions to skin tests **Neurological.** Increased intracranial pressure with papilledema (pseudotumor cerebri) usually after treatment. Convulsions; vertigo, headache. **Endocrine**. Development of Cushingoid state, suppression of growth in children, secondary adrenocortical and pituitary unresponsiveness, particularly in times of stress, as in trauma, surgery or illness, menstrual irregularities, decreased carbohydrate tolerance, manifestations of latent diabetes mellitus, increased requirements for insulin or oral hypoglycemic agents in diabetics **Ophthalmic.** Posterior subcapsular cataracts, increased intraocular pressure, glaucoma, exophthalmos. **Metabolic.** Negative nitrogen balance due to protein catabolism

DOSAGE AND ADMINISTRATION: The initial dosage may vary from 4 to 48 mg per day **Requirements are variable and must be individualized on the basis of the disease under treatment and the response of the patient.** The proper maintenance dosage should be determined by decreasing the initial dosage in small decrements at appropriate time intervals until the lowest dosage which will maintain an adequate clinical response is reached If after long-term therapy the drug is to be stopped, it is recommended that it be withdrawn gradually rather than abruptly

ALTERNATE-DAY THERAPY (ADT): ADT is a corticosteroid dosing regimen in which twice the usual daily dose of corticoid is administered every other morning The purpose of this mode of therapy is to provide the patient requiring long-term pharmacologic dose treatment with the beneficial effects of corticoids while minimizing certain undesirable effects including pituitary-adrenal suppression, the Cushingoid state, corticoid withdrawal symptoms, and growth suppression in children.

Medrol (methylprednisolone) or other short-acting (producing adrenocortical suppression for 1¼ to 1½ days following a single dose) corticoids are recommended for ADT. Complete control of symptoms will not be possible in all patients When considering this mode of therapy, keep in mind the basic principles and indications for corticosteroid therapy The benefits of ADT should not encourage the indiscriminate use of steroids

SUPPLIED: **2 mg**—in bottles of 30 and 100 scored tablets; **4 mg**—in bottles of 30, 100 and 500 scored tablets and in 21 scored tablet Dosepak™, **16 mg**—in bottles of 50 scored tablets and in 14 scored tablet ADT Pak® (formerly Alternate Daypak©)

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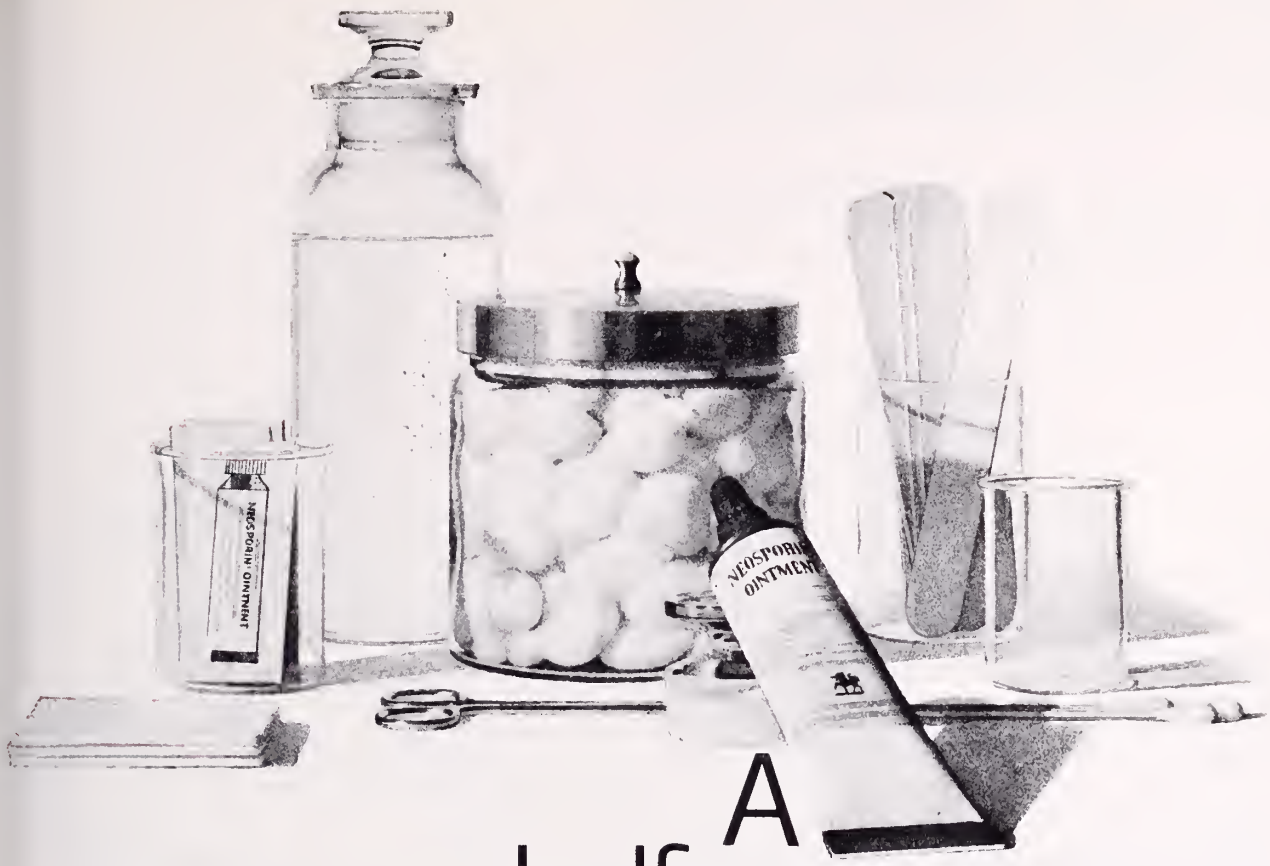

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Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs.
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INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

WARNING: Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

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This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension.* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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Just once or twice daily for maintenance. Hydrochlorothiazide to help keep blood pressure down and triamterene to help keep potassium levels up.

The West Virginia Medical Journal

Vol. 71, No. 7 July, 1975

Catecholamines And Affective Brain Disorders*

Albert J. Azzaro, Ph. D.; and Jose A. Gutrecht, M. D.

Affective brain disorders (i.e., mania and depression) have long been the topic of experimental investigation. Numerous clinical, behavioral, physiological and biochemical studies have been undertaken to determine the underlying causes of these abnormal behavioral states. In spite of research efforts, however, we are still in search of a unifying concept which would clearly describe the pathophysiology of affective disorders.

One of the more popular concepts which has been proposed to describe the biochemical basis of depression and mania is that developed by neuroscientists as "the catecholamine hypothesis of affective disorders." During the past 20 years there has been an increasing body of evidence suggesting a possible link between alterations in mood and changes in brain catecholamine metabolism. Although most of the evidence is indirect (i.e., derived mainly from the actions of pharmacological agents that are used to produce or treat affective states), this hypothesis provides us with a rational basis for both the pathophysiology and treatment of affective disorders.

Distribution of Catecholamine Containing Neurons of the CNS

The presence of catecholamines (dopamine-DA and norepinephrine-NE) in the mammalian brain has been known for more than 20 years. At the time of discovery, NE had already been shown to function in the peripheral autonomic nervous system as a neurotransmitter substance. The finding of large concentrations of NE in brain tissue brought about the suggestion of a similar role for brain NE. Dopamine, the immediate precursor of NE, was originally considered to merely assume a precursor role in the CNS. The finding that NE and DA were unequally distributed within discrete regions of the CNS, however, led scientists to suggest that DA played more than a precursor role and may actually function as a neurotransmitter substance.

The Authors

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With the advent of specific histochemical fluorescence procedures in the early 1960's and the later development of specific neuronal lesioning agents (6-hydroxydopamine), it was shown that indeed catecholamines were exclusively present within specific neuronal tracts of the CNS that innervated various brain regions in a manner that was consistent with their regional biochemical distribution.

It is now well established that NE and DA assume a neurotransmitter role within specific neurons of the CNS. NE containing neurons originate in the pons-medulla (predominantly the locus coeruleus) regions of the brain stem and their ascending fibers are found terminating in (1) the cerebellar cortex (synapse upon Purkinje cells), (2) the hypothalamus, (3) cerebral cortex, and (4) limbic structures (hippocampus and amygdaloid nucleus). Based upon innervation of specific brain regions, it would seem reasonable to assume noradrenergic neurons (those containing NE) at least modulate motor and behavioral activity.

Dopaminergic neurons (those containing DA as the neurotransmitter) assume a more restricted distribution in the CNS. The overwhelming majority of dopaminergic neurons belong to the so-called "nigrostriatal pathway" which originates with cell bodies in the zona compacta of the substantia nigra and terminates in the corpus striatum. It is the severe degeneration of the nigrostriatal pathway which is ultimately responsible for the movement disorders seen in Par-

*Delivered during the 107th Annual Meeting of the West Virginia State Medical Association, August 21-24, 1974, at The Greenbrier, White Sulphur Springs.

kinson's disease. A small number of the dopaminergic neurons in this pathway deviate from basal ganglion structures, and ultimately innervate the amygdaloid nucleus. This latter connection is interesting and may relate to the depressive states seen in patients with Parkinson's disease. Other dopaminergic neurons are found within the hypothalamus. Cell bodies originate in the arcuate nucleus and innervate the external layer of the median eminence. There is now sufficient data to suggest that these neurons probably modulate endocrine function by influencing the release to pituitary hormones.

Biochemistry and Physiology of Neurosecretion of Catecholamines

Neurological research has provided us with a great deal of information about the biochemistry and physiology of neurosecretion of brain catecholamines. The biosynthesis of catecholamines, from the amino acid precursor tyrosine, occurs primarily within the cytoplasm of the neuron (see Figure 1). Since dopamine is the immedidate precursor to norepinephrine it is postulated that in those neurons where dopamine functions as the neurotransmitter, the enzymatic conversion of dopamine to NE proceeds at a very slow rate or not at all.

Current concepts of neurosecretion would suggest that synthesized catecholamines are stored within nerve ending particles (synaptic vesicles) which upon nerve stimulation migrate toward the neuronal membrane and extrude their contents into the synaptic space. In this way, released catecholamines become available to interact with postsynaptic structures (receptors) communicating the presynaptic information.

The inactivation of neuronally released catecholamines is complex. Our present knowledge of CNS catecholamine neurosecretion suggests that at least two mechanisms are available for the inactivations of NE or DA in the synaptic region. Both amines may either undergo enzymatic destruction by the enzyme catechol-0-methyltransferase or become rapidly reaccumulated by a very efficient transport process known as "neuronal re-uptake" (Figure 1). This latter process is a highly selective active transport system located within the neuronal membrane and accounts for approximately 90 per cent of the inactivation of released catecholamines. A number of pharmacological agents which alter be-

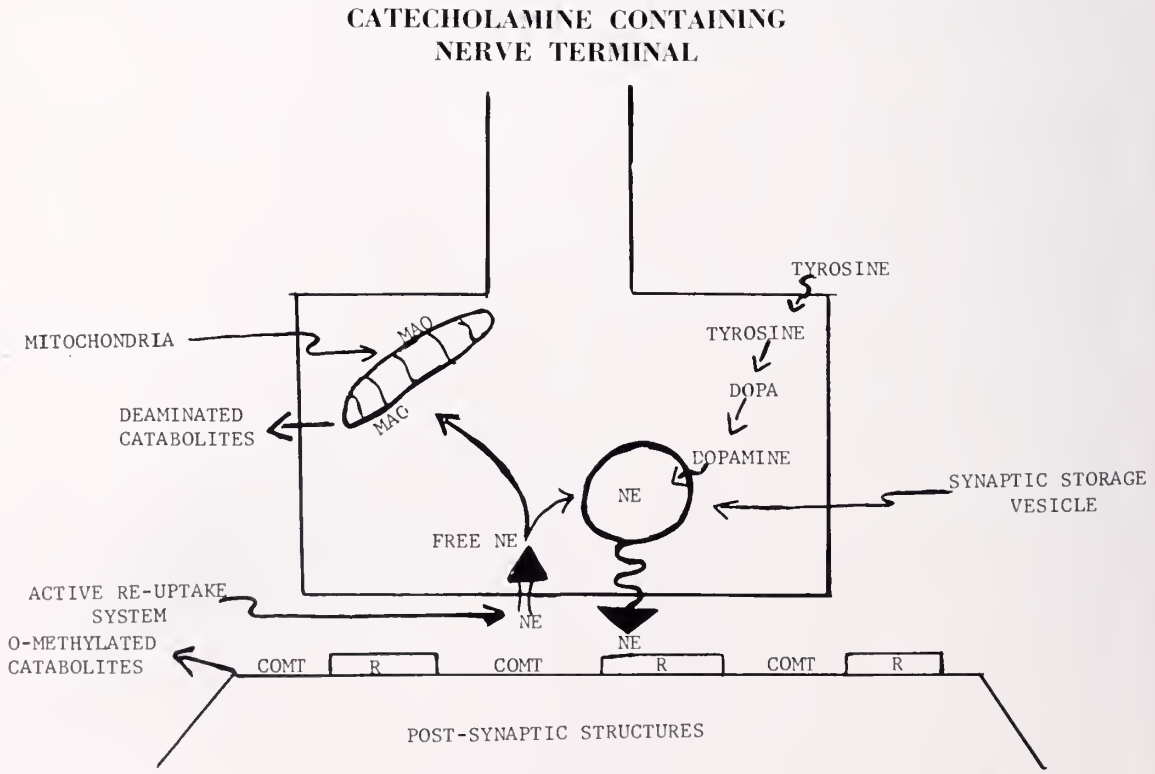

Figure 1. *Physiology & Biochemistry of Catecholamine Neurosecretion:* **Catecholamines (i.e., dopamine and or norepinephrine) are synthesized within the neuron, from dietary tyrosine, and stored within nerve ending synaptic vesicles. Upon nerve stimulation, norepinephrine (or dopamine in those neurons where dopamine is the neurotransmitter) is secreted into the synaptic space where it will interact with post-synaptic receptors (R). Inactivation of catecholamine neurotransmitter occurs primarily through the active reaccumulation of secreted catecholamines. Enzymatic degradation of catecholamines takes place through an interaction with intra-neuronal mitachondrial monoamine oxidase (MAO) or extra-neuronal catechol-0-methyltransferase (COMT). Norepinephrine—NE.** *See text for details.*

havior (e.g., cocaine and amphetamine) probably do so by altering the ability of the nerve terminal to reaccumulate released catecholamines.

Reaccumulated catecholamines can be reincorporated into synaptic vesicles or enzymatically destroyed by the intraneuronal enzyme monoamine oxidase (MAO). Enzymatic catabolism probably is more prominent under normal circumstances; however, agents which inhibit MAO may force more of the amine to be reutilized and in this way upset the normal physiology of neurosecretion.

Catecholamine Theory of Affective Disorder

For more than 15 years, behavioral and neuroscientists have been suggesting a relationship between affective disorders and alteration in brain catecholamine metabolism. Because of a closer correlation between alterations in brain NE metabolism and mood changes, as well as noradrenergic innervation of specific brain regions that would more likely be involved in abnormal behavior, it has been suggested that alterations in brain NE metabolism (rather than DA) may be more closely linked to affective states.

The catecholamine theory of affective behavior as proposed by Schildkraut and others is based upon the assumption that affective disorders are the extremes of the normal mood spectrum. Therefore, it has been suggested that depression is associated with a functional deficit of norepinephrine at critical synapses. On the other hand, mania (the opposite extreme) would be associated with a functional excess of NE at the same critical synapses. This theory can be diagrammed as follows:

Depression (NE deficit) ⟷ Normal ⟷ Mania (NE excess)

The behavioral state of individual patients would thus depend upon the functional activity of brain NE.

The catecholamine hypothesis is largely based upon clinical observations of patient behavior following the administration of drugs which are known to alter catecholamine metabolism (Table 1). Reserpine, a drug well known for its depleting action on brain catecholamines, will produce sedation and even occasional depression. In fact, the contraindication of reserpine in depressed patients is well established. Similar observations have been made following the administration of tetrabenazine, a drug which also has been shown to deplete brain catecholamines. The depletion of NE by reserpine or tetrabenazine should lead to a reduction of available NE for release upon nerve stimulation and in this fashion result in a functional deficit of NE at synapses.

On the other hand, the well known CNS stimulant, amphetamine, has been shown to cause a release of neuronal NE resulting in a build-up of NE in the synaptic region (functional excess). The psychic stimulation seen after amphetamines (especially after large doses) has been compared to the behavior observed in manic disorders. In addition, amphetamine stimulation is often followed by a rebound period of depression and fatigue. It is tempting to speculate that this rebound period may reflect a temporary reduction of neuronal NE due to continued release of this amine by amphetamine. This latter effect has been demonstrated in animal studies.

The interesting observation that L-Dopa reverses the reserpine induced depression further suggested a role for catecholamine in affective states. L-Dopa helps to restore the level of brain catecholamines after reserpine, since dopa is the natural precursor of DA and NE. Finally the administration of a MAO inhibitor (e.g., tranylcypromine) prior to reserpine will prevent both the reserpine induced depression and depletion of brain catecholamines; therefore, it would appear that a direct relationship exists between mood changes and brain NE concentration.

Research in this area of neuropsychiatry was greatly enhanced by the discovery in 1957 that the MAO inhibitor, iproniazid, had therapeutic value in treating depressed patients. Subsequent studies, in experimental animals, revealed some rather interesting similarities between our therapeutic approaches to affective disorders and the effects of such treatment upon brain NE metabolism (Table 2). Monoamine oxidase inhibitors, tricyclic antidepressants, and electroshock, the most common approaches to the treatment of depressive states, all have been shown to alter the neuronal re-uptake of NE released after

TABLE 1

Pharmacological Basis for the Catecholamine Hypothesis of Affective Brain Disorders

Drug	*Effect On Behavior*	*Effect On Catecholamines*
Reserpine	Sedation (Some Depression)	Depletion
Tetrabenazine	Sedation (Some Depression)	Depletion
Amphetamine	Stimulation	Release from Neurons
Dopa	Reverses Reserpine Sedation	Increases Levels (Particularly after Reserpine)
Tranylcypromine	Prevent Reserpine Sedation	Prevents Depletion after Reserpine

TABLE 2

Treatment of Affective Brain Disorders

Treatment	*Behavioral State*	*Action On Norepinephrine Neurons*
A. Tricyclic Antidepressants: Amitriptyline (*Elavil*) Desipramine (*Norpramin*) Imipramine (*Tofranil*) Nortriptyline (*Aventyl*) Protriptyline (*Vivactil*)	Depression	Inhibition of Neuronal Re-Uptake
B. Monoamine Oxidase Inhibitors: Isocarboxazid (*Marplan*) Nialamide (*Niamid*) Phenelzine (*Nardil*) Tranylcypromine (*Parnate*) Pargyline (*Eutonyl*)	Depression	Inhibition of Monoamine Oxidase Inhibition of Neuronal Re-Uptake
C. Electroshock	Depression	Reduction of Neuronal Re-Uptake
D. Lithium Salts	Mania	Stimulation of Neuronal Re-Uptake Inhibition of Release

nerve stimulation. This neuronal re-uptake blocking action of the so-called MAO inhibitors appears to correlate very closely (more so than the ability to inhibit MAO) with their clinical efficacy in depressed patients. Neuronal re-uptake is primarily responsible for the inactivation of neuronally released NE at the synapse (see above). The ability to alter neuronal re-uptake, either chemically or electrically, provides us with a method of modulating the synaptic activity of NE.

Lithium salts have become very popular among physicians for the treatment of manias. Lithium has been shown to inhibit the release but stimulate the re-uptake of neuronal norepinephrine. It is interesting that lithium alters NE metabolism in a way that is opposite to that of antidepressant therapy since depression and mania are considered to make up the opposite poles of the affective behavioral spectrum.

If, indeed, manic and depressive behavior is associated with a functional excess or deficit of NE at critical synapses, the actions of electroshock and/or therapeutic agents used in the treatment of affective disorders would provide the biochemical means for correcting these abnormal behavioral states. If we view the functional excess of manias as an increase in the number of NE molecules interacting with postsynaptic neuronal sites, the reduced release and stimulated re-uptake of neuronal NE seen after lithium would reduce the number of NE molecules at central synapses and in this way correct the mania. On the other hand, if depressions are associated with a deficit in the number of NE molecules available to interact within central synapses, the inhibitory action of antidepressant therapy on the neuronal re-uptake of NE would reduce the inactivation of NE and increase the number of NE molecules acting at these same central synapses.

Clinical Studies in Patients with Affective Disorders

Several laboratories are now attempting to examine brain catecholamine metabolism in patients with affective disorders. The measurement of urinary levels of NE or its metabolites in patients has, in general, supported the catecholamine hypothesis. Patients with manic disorders tend to excrete large concentrations of NE while patients with depressive disorders tend to excrete low concentrations of NE. These results, however, must be interpreted with caution since both changes in the psychic and the physical state of the patient may alter the adrenal secretion of catecholamines which would result in changes in urinary levels of catecholamines.

More recently it has been shown that urinary and CSF concentrations of 3, methoxy-4-hydroxyphenyl-glycol (MOPEG), the major catabolite of brain NE, may serve as a better index of central noradrenergic activity. Similar experiments have been conducted in psychiatric patients where MOPEG values have been obtained. A very close correlation has been shown between urinary MOPEG concentrations and the affective state of manic-depressive patients studied longitudinally. The progressive movement of patients through many degrees of depression, hypomania and subsequent depression was paralleled by a corresponding rise in urinary MOPEG values that again declined when depression returned.

In other studies where MOPEG was measured in the urine of patients diagnosed as belonging to specific depressive sub-groups, an interesting relationship was observed. Chronic characterological and schizo-affective depressive disorders were found to excrete high and low values of the MOPEG, respectively, with recurrent endogenous falling in between these two extremes. In similar studies by this group, a relationship was observed between urinary MOPEG excretion and response to antidepressant therapy. Patients excreting high concentrations of MOPEG seemed to respond favorably to amitriptyline (Elavil) but not imipramine (Tofranil) or desipramine (Norpramin). The opposite was true for patients excreting low values of MOPEG. If these interesting findings are reproducible by others, they may provide the basis for confirmation of clinical diagnosis of depressive disorders as well as predicting the response to antidepressant therapy.

Summary

A relationhip appears to exist between brain NE concentrations and affective behavioral states. The actions of electroshock and pharmacological agents upon brain NE metabolism would seem to provide a means of correcting for any functional change of this neurotransmitter substance which may be associated with the affective state. These two observations provide the basis for what has now been termed the catecholamine hypothesis of affective disorders.

In order to establish the validity of the catecholamine hypothesis, experiments have been carried out in psychiatric patients with affective disorders. The results of such experiments, although not conclusive, would seem to support the catecholamine hypothesis. In addition, these studies may provide the basis for future laboratory tests to help diagnose and treat depressive illness.

A list of references may be obtained by writing The Journal.

FDA Bans Pet Turtle Sales

THE Food and Drug Administration has moved to ban commercial distribution and sales of pet baby turtles and turtle eggs.

"Despite prolonged and intensive control efforts by FDA, in cooperation with state and local health officials, turtles continue to be a significant carrier of pathogenic organisms, particularly affecting small children. We have concluded that a ban of sales is the only action which will adequately protect the public health," Dr. Alexander M. Schmidt, Commissioner of Food and Drugs, said.

Turtles carry *salmonella* and *arizona* organisms, which can cause acute gastrointestinal infections leading to other complications and even death. The organisms are transmitted to children when they play with pet turtles and then put their hands in their mouths without washing them. Adults can become infected through contamination of their hands or of food and kitchen utensils.

It has been estimated that as many as 280,000 cases of salmonellosis each year in the United States are turtle-associated.

For the past two years, FDA has required shippers to certify that their turtles were free of *salmonella* or *arizona* organisms. The certification program has failed to prevent contaminated turtles from reaching the market. Turtles properly certified under the program as free of the disease-producing organisms nevertheless were highly susceptible to re-contamination from bacteria in their food and in their water environment. A survey showed that 54 per cent of the turtles certified as *salmonella* or *arizona* free between December 1972 and Dcember 1973 were contaminated when re-tested.

Anaerobic Infections

Jack L. Le Frock, M. D.; and Albert S. Klainer, M. D.

RECENT years have seen remarkable advances in the isolation and identification of anaerobic bacteria. Detection of anaerobes as agents of life-threatening infection has become of considerable clinical significance, and many hospitals are establishing special anaerobic laboratories to deal with these bacteria.

An organism which requires the presence of oxygen is an AEROBE; surprisingly few bacteria of medical importance are strict aerobes. Most, in fact, are FACULTATIVE ANAEROBES, that is, they do not require oxygen but can grow in its presence or absence (staphylococci, streptococci, and the common enteric bacteria such as *E. coli, Klebsiella,* and *Proteus* species are all facultative microbes). In contrast, STRICT ANAEROBES, which are the basis for this report, are inhibited or killed when their environment contains oxygen.

The strict anaerobes form a heterogeneous group, including both Gram-positive and Gram-negative cocci and bacilli. Perhaps the best known of the strict anaerobes are the Clostridia, Gram-positive rods, which are among the easiest of anaerobes to cultivate and whose characteristic ability to form spores has been of long-standing interest to microbiologists and physicians alike. Nevertheless, a large number of anaerobic bacteria which do and do not form spores have become of major importance as potential human and animal pathogens. Tables 1, 2, and 3 list the most commonly encountered anaerobes, their microscopic morphology and where they are found as part of the normal flora.

TABLE 1

Anaerobic Cocci

Anaerobic cocci	*Aerobe Similarity*	*Microscopic Morphology*	*Normal Flora*
Peptococcus	Staphylococci	Small-large gram + cocci, singles, pairs, irregular clumps	Mouth, Upper G. I. tract
Pepto-streptococcus	Streptococci	Small large gram + cocci, pairs and chains	Mouth, Upper G.I. tract
Veillonella	Neisseria	Small gram negative cocci pairs, short chains and irregular clumps	Mouth, Nasopharynx, vaginia, Intestinal tract

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Pathogenesis of Anaerobic Infection

Anaerobic bacteria are saprophytic and widespread throughout the body as normal flora, especially in association with mucous membranes near an external orifice (mouth, nose, pharynx, lower intestine, anterior urethra, and vagina) and the skin.

The majority of anaerobic infections are endogenously acquired from the normal microflora. In the pathogenesis of endogenous infections, the virulence of the organism is least important, while host factors are far more important. Most frequently, members of the normal flora cause

TABLE 2

Anaerobic Gram Positive Rods

Clostridia	Spore-forming rods
Bifidobacterium	Nonspore forming Similar to lactobacillus Bifid-shaped Produces lactic acid
Propionbacteria	Pleomorphic
(anaerobic diphtheroids)	Slender rods Club-shaped Produce propionic acid

All three are normal saprophytes in lower G.I. tract.

TABLE 3

Anaerobic Gram Negative Rods

Bacteroides	Nonspore forming Pale centered Produce short chain, fatty acids Two biotypes a) oral cavity—sensitive to bile and penicillin b) bowel—resistant to bile and penicillin
Fusobacterium	Boat or cigar-shaped Produce butyric acid Chiefly in oral cavity and occasionally intestinal tract

disease when they inhabit or invade areas in which they do not normally reside, especially following interruption of the skin or mucosal surfaces.

The key to anaerobic pathogenicity is apparently the level of oxidation that exists in the body's tissues, usually expressed in terms of oxidation-reduction or redox potential (eH). Redox potential is thought to be the body's main defense against pathogenetic proliferation of endogenous anaerobes. When eH falls below normal (+0.12 volts), saprophytic anaerobes can invade the tissues and multiply rapidly.

The following are important features of anaerobic infections:

A. Lowered Redox Potential:

1. Tissue Anoxia:
   (a) Impairment of vascular supply by trauma to vessels; pressure by tourniquets, plaster casts, emboli.
   (b) Pressure of foreign bodies such as sutures, prosthesis, dirt and clothing.
   (c) Accumulation of lactate producing acidosis which, in turn, may be aggravated by resultant proteolysis and accumulation of amino acids. It has been shown that lowering the pH below normal will permit Clostridia to proliferate at otherwise inhibitory eH levels; this may be true of other anaerobes as well.
2. Tissue destruction by trauma, infection or injection of drugs such as epinephrine or quinine (which is also used as a filler for "street heroin").
3. Aerobic infections (e.g. *Streptococcus pyogenes*) which lower eH from +0.3 to −0.2 volts sufficient for the proliferation of anaerobes.
4. Tissue necrosis from ionized calcium salts.
5. Surgical manipulation, such as dental extractions, may produce necrosis and may lower eH sufficiently to permit infection by anaerobic mouth organisms.

B. Exotoxins

Clostridia elaborate soluble exotoxins while actively multiplying in areas of reduced redox potential. The exotoxins of *Cl. tetani* and *Cl. botulinum* disturb nerve conduction, while the exotoxins of the gas-producing organisms destroy blood cells and tissues. Most species elaborate many different exotoxins, each of which is antigenically distinct. *Clostridia perfringens* have seven types (A-F). Type A is hemolytic and necrotizing. Other type A toxins break down collagen, other proteins, hyaluronic acid, and DNA (Table 4).

TABLE 4

Toxins of Clostridium Perfringens

Toxin	*Mode of Action*
Alpha	Lecithinase (lethal, dermonecrotic, hemolytic)
Theta	"Hot-cold" hemolysin
Kappa	Collagenase
Mu	Hyaluronidase
Nu	Deoxyribonuclease
Others	Fibrinolysin Phagocytosis-inhibiting factor

C. Gas Production

Gas production is well-known in Clostridia infection, but many other anaerobes such as anaerobic streptococci, bacteroides, and anaerobic micrococci also produce gas. The gas dissects along tissue planes facilitating dissemination of organisms and increasing tissue pressure thereby reducing the supply of blood, oxygen and antibiotics.

D. Thrombophlebitis

Bacteroides and anaerobic streptococci have a great tendency to produce thrombophlebitis in infected areas; this may result from production of heparinase. Septic embolization from these veins produces abscesses in the lungs, brain or joints.

Clinical Features of Anaerobic Infections

Possibly the most commonly encountered infection is brain abscess in which anaerobic streptococci and bacteroides are relatively common, often occurring in mixed infections with other facultative bacteria, other anaerobes, or with each other (Table 5).

Brain abscesses originate from new or old foci of infection in the middle ear, paranasal sinuses, lung, pleura, or pelvis (Table 6). The manifestations of a well established brain abscess are primarily those of space-occupying mass. Severe headaches in patients with cyanotic congenital heart disease or with chronic infection of ears, sinuses, or lungs are important symptoms. Al-

though these anaerobes are virtually always sensitive to antibiotics, excision of the abscess cavity followed by massive antibiotic therapy for four to six weeks is the treatment of choice.

Another relatively common anaerobic infection is the putrid lung abscess, generally a complication of aspiration of oral cavity material which, because of poor hygiene, contains large numbers of bacteria including anaerobes. Table 7 lists some common underlying or predisposing conditions for the development of anaerobic pleuropulmonary infections. This type of lung abscess is generally produced by a mixed population of anaerobes and facultative oral bacteria which are susceptible to high dose penicillin (20-30 million units a day). The posterior segment of the right upper lobe is the most frequent site of anaerobic lung abscess, with the apical segments of both right and left lower lobes being next. These bronchioles provide the most direct avenue to a dependent segment at the times of aspiration in subjects lying on their back or side.

Anaerobic bacteria may produce extensive pneumonia, commonly due to bacteroides; there is often an associated empyema from which the anaerobe can be cultured. The exact pathogenesis of anaerobic pleuropulmonary infection has not been definitively established, but there is much clinical data to suggest what occurs. Most patients are ill before they have clinically apparent pneumonia; positive blood cultures are the rule rather than the exception and, together, these observations suggest that anaerobic pleuropulmonary infections are a complication of a preceding focus of infection—probably intraabdominal or pelvic from which septic emboli give rise to bacteremia and deposition of anaerobes in the lung.

In the necrotic tissue of a pulmonary microinfarct, conditions of anaerobiosis pertain, and the microorganisms multiply: their sheer numbers and mass serve to maintain the highly reduced environment they require. In keeping with this is the additional fact that the sputum of patients with this type of infection literally teams with small gram negative rods (the presence of such organisms on a gram stain of sputum with little or no growth on routine culture

TABLE 5

Microbiology of Brain Abscess

Anaerobes
Bacteroides fragilis
Other Bacteroides species
Fusobacterium (espec. F. necrophorum)
Anaerobic cocci and streptococci
Microaerophilic cocci and streptococci
Actinomyces israelii
Other Gram-positive nonsporulating rods
Clostridium
Aerobes
Staphylococcus aureus
Pneumococcus
Viridans streptococci
Haemophilus influenzae
Haemophilus aphrophilus
Other Gram-negative bacilli
Nocardia asteroides
Meningococcus

TABLE 6

Underlying Sources of Brain Abscess

1. Chronic otitis media, mastoiditis
2. Sinusitis—particularly frontal and sphenoid sinuses
3. Lung abscess, pneumonia, empyema, bronchiectasis
4. Congenital heart disease with right to left shunt
5. Bacterial endocarditis
6. Sepsis, particularly that following abortion or dental extraction
7. Infections of face and scalp
8. Tonsillitis
9. Carbuncle
10. Intracranial surgery
11. Head injury

TABLE 7

Underlying or Predisposing Conditions in Anaerobic Pleuropulmonary Disease

Aspiration
Altered consciousness
Ethanolism
General anesthesia
Esophageal dysfunction or intestinal obstruction
Tonsillectomy or tooth extraction
Preceding extrapulmonary anerobic infection
Peridontal disease
Pharyngitis
Otitis-mastoiditis
Infections of the female genital tract
Intraabdominal infection
Bacterial endocartitis
Post-thoracotomy or penetrating chest wound
Local underlying conditions
Bland pulmonary infarction
Bronchogenic carcinoma
Bronchiectasis
Foreign body
Systemic underlying conditions
Diabetes mellitus
Malignancy (nonpulmonary)
Corticosteroid or immunosuppressive therapy
Preceding antimicrobial therapy

should suggest anaerobic pneumonia). Much recent discussion has centered on antibiotic treatment of this anaerobic syndrome, with lincomycin prominently mentioned. In fact, some bacteroides resist lincomycin. Clindamycin or chloramphenicol may be required, and high dose penicillin (6 million units q 4 hours IV) may be useful.

Bacteremia due to anaerobes, other than that accompanying the syndrome of anaerobic pleuropulmonary infection, is confined to specific situations: (1) Bacteremia in a background of host-defense altering disease; (2) Anaerobic *diphtheroid endocarditis*, a subacute endocarditis, usually affecting previously damaged heart valves and closely mimicking *Streptococcus viridans* endocarditis in symptomatology and course (an important difference between the two diseases, however, is the tendency of anaerobic diphtheroids to be resistant to penicillin); (3) Anaerobic bacteremia arising as a complication of wound infection or an infectious complication of surgery such as subdiaphragmatic or pelvic abscess; and (4) Bacteremia resulting from intra-abdominal or pelvic sepsis such as ruptured appendix, non-gonococcal pelvic inflammatory disease, or septic abortion.

Bacterial Endocarditis

Anaerobic bacteria may cause endocarditis, although involvement with these organisms is seldom reported. If special anaerobic techniques are used for routine blood cultures, then the so-called syndrome of "non bacteremic" endocarditis becomes infrequent. The organisms involved are *Bacteroides, Fusobacterium, Clostridium, Propionibacterium*, and *Peptostreptococcus* species. The clinical manifestations of endocarditis due to anaerobic bacteria do not differ appreciably from those described for endocarditis due to facultative microorganisms. In Felner and Dowell's series, however, the percentage of patients with emboli was higher and the percentage with preexisting heart disease was lower than that reported for patients with facultative organisms. In the above review, thrombophlebitis was found in 20 per cent and embolization in 30 per cent of 250 patients with bacteremias due to *Bacteroides* and *Fusobacterium* species.

Pelvic Infections

The vagina, uterus and parametrical structures are often sites of anaerobic infections such as Bartholin's abscess, endometritis, parametritis, parametrial abscess, pelvic peritonitis and episiotomy infection. The bacteria involved are listed in Table 8. The usual pattern is one of polymicrobial growth. Anaerobic streptococci and bacteroides are prominent members of the normal vaginal flora, and from here they can invade the uterine or pelvic cavity whenever anaerobic conditions are appropriate. The most important anaerobic pelvic infections are complications of malignancy, septic abortion, the puerperium, or recent gynecologic surgery.

Clostridium perfringens is often present in the vagina without causing disease. It may invade a dead fetus or placenta producing local chorioamnionitis, or a low grade endometritis or myometritis with extensive myonecrosis and even perforation. The most severe clostridial uterine infection takes the form of severe endometritis, myometritis with necrosis, perforation, peritonitis and septicemia. Often it is accompanied by intravascular hemolysis, jaundice, hemoglobinuria, hypotension and renal failure.

Suppurative thrombophlebitis of the pelvic veins may complicate anaerobic gynecological or obstetrical infections. Liquefaction of infected thrombi in the uterine sinusoids and uterine or ovarian veins releases showers of small septic emboli resulting in bacteremia associated with repeated episodes of shaking chills, hectic fever, and toxemia.

Abdominal Infections

Anaerobic intraabdominal abscesses, generalized peritonitis, and postoperative wound infec-

TABLE 8

Microbiology of Pelvic Infections

Anaerobes
Gram-negative rods
Bacteroides fragilis
Bacteroides melaninogenicus
Other Bacteroides sp
Fusobacterium
Cocci
Peptostreptococcus
Peptococcus
Veillonella
Gram-positive non-spore forming rods
Propionibacterium
Bifidobacterium
Eubacterium lentum
Gram-positive spore forming rods (Clostridium)
C. perfringens
C. butyricum
C. bifermentans
Aerobic and Facultative Bacteria
Escherichia coli
Streptococcus Group A, D
Staphylococcus epidermidis
Lactobacilli
Pseudomonas
Proteus
Neisseria (nongonococcal)
Citrobacter
Hemophilus vaginalis

tions occur frequently after contamination of devitalized tissue with contents of large bowel flora. This may occur after bowel surgery, appendicitis, diverticulitis, or cholecystitis. Anaerobic bacteria may spread through the portal circulation producing solitary liver abscesses (aerobic abscesses tend to be multiple) in the right lobe as a complication of pylephlebitis. This process is characterized by severe rigors, fever, an enlarged tender liver, right upper quadrant pain, and an elevated serum alkaline phosphatase often in association with otherwise normal liver function studies. Anaerobic liver abscesses are almost all produced by bacteroides and anaerobic streptococci either alone or in mixed culture.

Skin and Soft Tissue Infections

A. Clostridial Wound Infections:

The presence of clostridia in a wound may produce three grades of clinical infection: simple wound contamination, anaerobic cellulitis, and true gas gangrene.

1. Simple contamination:

One or more clostridia are isolated from a wound, but subsequent invasion of the underlying tissues does not necessarily occur. This entity is usually harmless aside from causing some delay in healing.

2. Anaerobic cellulitis:

Clostridia invade the fascial planes without invading muscle tissue; toxin production is minimal. Pain, edema, or systemic toxemia of gas gangrene does not occur. The diagnosis is confirmed by finding clostridia in smear and culture. Anaerobic cellulitis is not a serious disease and carries a good prognosis. The treatment is removal of dead tissue and the administration of penicillin.

3. Clostridial myonecrosis (Gas gangrene):

Gas gangrene, in contrast to anaerobic cellulitis, is characterized by invasion of healthy muscle with abundant formation of exotoxins. *Cl. perfringens* is the most common cause, but *Cl. oedematiens* and *Cl. septicum* can also produce gas gangrene by themselves. One of the earliest prodromal signs is the development of pain in the region of the wound; pain may be of sudden onset, but more commonly it develops gradually and steadily increases in intensity. Accompanying the pain there is progressive swelling and edema of the affected part, a steep rise in the pulse rate, and a variable rise in temperature although pyrexia is not great and is often absent. Treatment consists of the removal of dead tissue. Hyperbaric oxygen may be useful in selected cases of gas gangrene where it is not feasible to debride adequately. Wide exploration is necessary since the extent of muscle necrosis may exceed the limits of the overlying skin lesions. Although its value is not established, polyvalent clostridial antiserum is given intravenously every six hours for 24 hours. Penicillin intravenously is part of acceptable therapy but should be used in conjunction with, not in place of, adequate surgical debridement.

B. Non-Clostridial Wound Infections:

1. Progressive synergistic gangrene:

Bacterial synergistic gangrene following abdominal or thoracic trauma or surgery is a necrotizing lesion of the skin and subcutaneous tissue. It begins as a small, painful ulcer which gradually spreads and is surrounded by a rim of gangrenous skin and cellulitis. The skin often has bruised appearance. Anaerobic streptococci can be cultured from the advancing edge of the cellulitis and *S. aureus* or facultative gram-negative rods may also be recovered from the central ulcer.

2. Meleney's ulcer:

This is a deep subcutaneous infection which spreads widely producing necrotic ulcers with undermined edges. The ulcers heal very slowly even with adequate debridement and antibiotics. Microaerophilic streptococci are the causative organisms most frequently isolated.

3. Anaerobic streptococcal myositis:

Anaerobic streptococci may produce gas infection of muscle in a clinical setting similar to that of clostridial infection. In contrast to clostridial myositis, streptococcal myositis begins insidiously and elicits more erythema. Although the muscle is discolored and hemorrhagic in streptococcal infections, it will contract if stimulated. Recognizing streptococci in the smear may save a limb because amputation is usually unnecessary. Debridement, surgical drainage, local hydrogen peroxide and penicillin are the acceptable therapeutic regimen.

4. Infected vascular gangrene:

The anoxic or gangrenous tissue of the atherosclerotic limb provides ideal conditions for the proliferation of anaerobes. These bacteria may be either simple contaminants or may produce anaerobic cellulitis. Marked swelling, black discoloration of the skin, and abundant gas formation develop gradually. The odor is typically putrid, but little exudate is present. Although bacteroides and anaerobic streptococci are occasionally found, the greatest danger results from clostridia and their tendency to produce gas gangrene. Infected vascular gangrene should be

TABLE 9

Differentiation of Anaerobic Infections of Skin and Soft Tissues

	Anaerobic cellulitis	*Infected vascular gangrene*	*Clostridial myonecrosis*	*Streptococcal myositis*
Incubation	Almost always over 3 days	Over 5 days, usually longer	Usually under 3 days	3-4 days
Onset	Gradual	Gradual	Acute	Subacute or insidious
Toxemia	Nil or slight	Nil or minimal	Very severe	Severe only after some time
Pain	Absent	Variable	Severe	Variable; as a rule fairly severe
Swelling	Nil or slight	Often marked	Marked	Marked
Skin	Little change	Discolored, often black and dessicated	Tense, often very white	Tense, often with coppery tinge
Exudate	Nil or slight	Nil	Variable; may be profuse, serous, and blood stained	Very profuse; seropurulent
Gas	Abundant	Abundant	Rarely pronounced except terminally	Very slight
Smell	Foul	Foul	Variable, may be slight, often sweetish	Very slight, often sour
Muscle	No change	Dead	Marked change	

treated vigorously with local hydrogen peroxide, debridement of obviously devitalized tissue, and penicillin in an attempt to make amputation unnecessary.

Table 9 differentiates the common anaerobic infections of the skin and soft tissues.

Clinical Clues to the Diagnosis of Anaerobic Infections

In almost any severe infection, failure to identify the causative organism can lead to serious consequences. Where anaerobic microbes are involved, the consequences of diagnostic failure are often catastrophic. Prompt diagnosis and treatment are, therefore, of the essence.

The following questions should be asked when considering the possibility of anaerobic infection:

1. Is the infection in an area where anaerobes reside?
2. What is the clinical setting for this infection?
   a. Did the patient have recent abdominal or pelvic surgery?
   b. Did the patient have a recent abortion?
   c. Has the patient received antibiotic treatment?
   d. Is there an underlying disease such as diabetes, hemotopoietic malignancy, corticosteroid treatment, etc. (factors that lower host defense against bacterial infection)?
3. Is there a foul-smelling discharge?
   Foul-smelling pus unmistakenly indicates that anaerobes are present. The widespread belief that *Escherichia coli* and *Streptococcus* fecalis can produce a putrid or fecal odor is false.
4. Is there gas present in the tissues?
   This can be produced not only by clostridia, but also by bacteroides, anaerobic streptococci, and anaerobic micrococci. It should be realized that certain aerobes such as *E. coli* and Klebsiella have been reported to produce gas in diabetic patients.

Laboratory Diagnosis

Microbiologic clues suggesting possible infection with anaerobes are listed in Table 10.

Practically all of the anaerobes involved in infection in man are prevalent as indigenous flora on all mucosal surfaces and on the skin. Because of the possibility of contamination with normal microflora, special care must be taken in the collection of specimens for accurate identification of the pathogens involved.

The first principle, and most important, is to *avoid delay!* Processing of specimens must be prompt for oxygen exposure is lethal. Oxygen-free transport tubes are now available, but they are far from fool-proof. The laboratory should be warned in advance as to the nature of the specimen and the time to expect it so that a technician

TABLE 10

Microbiologic Clues Suggesting Anaerobic Infection

1. Suggestive morphology on gram stain of an appropriate clinical specimen especially if there is no growth anaerobically.
2. Failure to obtain growth from aerobic cultures within 36 hours.
3. Production of gas and/or foul odor in culture or specimen.
4. Growth on media containing kanamycin, neomycin or vancomycin.

may drop whatever work is at hand and process the anaerobic culture immediately.

Another helpful measure is the use in the laboratory of selective anaerobic media. Since some bacteroides require hemin and menindione, these may be incorporated into the media used. Most important, however, is the use of some means of suppressing facultative organisms which might otherwise overgrow the anaerobes. Blood agar with kanamycin and vancomycin added is excellent anaerobic selective medium. Also very useful, and often more readily available, is PEA agar (blood agar to which has been added Phenyl Ethyl Alcohol; this medium is traditionally used to isolate gram-positive bacteria from mixed cultures, since it effectively suppresses the growth of gram-negative bacteria—EXCEPT for anaerobes).

The simple gas pak anaerobic jar procedure appears to be as satisfactory for recovery of anaerobes from clinical specimens as the more cumbersome roll-tube and anaerobic chamber techniques (which are superior for normal flora studies).

Treatment

The aims of treatment of anaerobic infection are (1) to remove dead tissue that provides the environment favorable to the proliferation of anaerobic bacteria; (2) to check their spread into healthy tissues with drugs; and (3) to neutralize their toxins.

Antimicrobial therapy is aimed at containing the focal infection and the prevention and treatment of bacteremia. Many anaerobic infections are mixed, involving facultative and aerobic forms also. Anaerobic bacteria grow slowly so that their isolation and results of antimicrobial sensitivity tests are often delayed. Some laboratories may fail to recover certain or all anaerobes present in a specimen; in addition, standardized methods for antimicrobial sensitivity testing of anaerobes are just now being developed. For these reasons, prior to results of cultures or sensitivity tests, antimicrobial therapy which will be effective against all the potential pathogens should be initiated promptly.

Penicillin G is the drug of choice for all anaerobic infection except those due to *Bacteroides fragilis* and the rare strains of fusobacterium which are resistant to it.

Lincomycin is similar in activity to penicillin and can be used in penicillin allergic patients. It is somewhat more active against *B. fragilis* and less active against clostridia.

The recovery or anticipation of *B. fragilis*, a normal inhabitant of the gastrointestinal tract, the most frequently isolated clinically important anaerobic pathogen, and the most commonly isolated of all bacteroides species is the key to selecting either chloramphenicol or clindamycin, the two most broadly active of the currently approved antibiotics.

Chloramphenicol when tested by agar plate dilutions, or in thioglycollate broth, is bacteriostatic for 100 per cent of *B. fragilis* strains at therapeutically attainable concentrations of 3.1 to 12.5 micrograms per ml. in most studies; it is poorly bactericidal. None of the major categories of anaerobic pathogens currently demonstrates any significant resistance to chloramphenicol. The authors generally use 1 gram q 6 hr. IV of chloramphenicol in treating serious anaerobic infections. Chloramphenicol, until 1974, was considered the drug of choice for serious anaerobic infections of uncertain types and is still valuable in the treatment of anaerobic central nervous infections; however, because of the serious toxicity which accompanies its use on rare occasions, it is now being replaced with the use of clindamycin phosphate, an analog of lincomycin.

Clindamycin inhibits 90 to 100 per cent of *B. fragilis* strains at a concentration of 3.1 micrograms and the remainder at 6.2 micrograms per ml. in agar dilution studies from a number of laboratories; bactericidal activity is erratic. Clindamycin has poor cerebrospinal fluid penetration limiting its usefulness in infections of the nervous system. 600-900 mg. q 8 hr. IV for the treatment of anaerobic infections is desirable. It is the drug of choice in patients who are allergic to penicillin for the treatment of non *B. fragilis* anaerobic infection as well as infection due to actinomycosis, but it should be emphasized that clostridial infections not responding to clindamycin therapy have been reported. Clindamycin-associated colitis is being reported more frequently and diarrhea in patients receiving this drug should be watched with caution. Tedesco and his associates found a 21 per cent cumulative incidence of diarrhea and a 10 per

cent cumulative incidence of pseudomembraneous colitis in 200 patients; these findings differ markedly from the 4 per cent incidence of diarrhea reported in pre-marketing trials or a subsequent estimate of one per 100,000 patients. From our experience, the incidence of diarrhea is probably around 10 per cent and the incidence of pseudomembraneous colitis is 5 per cent.

Metranidazole has demonstrated excellent *in vitro* activity against anaerobes but clinical experience with this drug is lacking.

Table 11 notes the susceptibility of commonly encountered anaerobes to antimicrobial agents.

In general, antimicrobial therapy for anaerobic infections requires high dosage and prolonged treatment.

Surgical therapy is extremely important. The only form of an anaerobic abscess that does not require surgical drainage is the acute putrid lung abscess. In most superficial abscesses, drainage is usually curative, but deep abscesses require drainage plus antimicrobial therapy.

Patients with septic pelvic thrombophlebitis should be treated with heparin and may require vena caval and left ovarian vein ligation.

In case of clostridial infection, gas gangrene, or clostridial septicemia the efficacy of polyvalent antitoxin is still debated. The authors, however, still use it early.

Local application of hydrogen peroxide may be useful for anaerobic cellulitis and wound infections.

Hyperbaric oxygen is useful in cases of gas gangrene where it is not feasible to adequately debride necrotic tissue.

In conclusion, there has been the uneasy feeling that anaerobes may be a colossal hoax; we feel that anaerobes are important pathogens in the specific settings reported in this paper and are much more common than has been generally appreciated. Nevertheless, with the recent emphasis on anaerobic infections it must be remembered that aerotolerant facultative bacteria such as staphylococci and *E. coli* kill more patients than bacteroides.

TABLE 11

Susceptibility of Anaerobes to Antibiotics

	Microaerophilis and Anaerobic Cocci	*Bacteroides fragilis*	*Bacteroides melaninogenicus*	*Sphaerophorus*	*Fusobacterium*	*Eubacterium and Actinomyces*	*Clostridium*
Penicillin G	++++	+	++++	+++*	++++	++++	++++
Lincomycin	+++	+ to ++	+++	++	+++	+++	++
Clindamycin	+++	+++	+++	++	+++	+++	++ to +++
Tetracycline	++	++	+++	++ to +++	++ to +++	++ to +++	++
Chloramphenicol	+++	+++	+++	+++	+++	++ to +++	+++
Erythromycin	++ to +++	++	++	+	+	++ to +++	++
Vancomycin	++ to +++	+	+	+	+	?	+++
Metronidazole	++	+++	+++	+++	+++	?	+++

++++ Drug of choice; +++ Good activity; ++ Moderate activity; + Poor or inconsistent activity

*Few strains resistant

Special Article

What Is Happening To West Virginia's Medicare Dollars?

Lydia S. Aston, R. N., M. P. H.; John M. Krall, Ph. D.; And Walter A. Morgan, M. D., M. P. H.

MEDICARE is upon us. While it pays only part of the health care costs of about 23.5 million aged and disabled Americans, it exerts tremendous influence over the cost and kind of health care purchased by the rest of the American people.

Are rural Americans (West Virginians in particular) getting their fair share of these benefits?

When Medicare began paying health bills in 1966 the Social Security Administration (SSA) started recording the amount, the kind and cost of health services it paid for, as well as certain characteristics of the claimants: their age, sex, race and residence, for example. This information is reported annually.[1]

These reports indicate that Medicare per capita reimbursements to West Virginia's residents are extremely low. Of particular concern are reimbursements for the physician and related out-of-hospital services which have repeatedly been the lowest in the nation. It is the purpose of this paper to present available statistical information describing this problem and to identfy the probable factors contributing to it.

The Medicare Law (PL 89-97) consists of two principal parts, A and B. Part A is a hospital insurance program and Part B provides supplementary medical insurance.

The hospital insurance benefit package provides payment on a "reasonable cost" basis. It covers part of the costs of hospitalization, outpatient diagnostic services, post-hospital convalescent care provided in an extended care facility, and home health services following hospitalization. These services are financed from the Social Security Trust Fund.

The patient pays the first $72, nothing for 60 days, then $18 a day through 90 days, then $36 a day if "reserve days" remain in the patient's "account." There are some exclusions. The SSA contracts with fiscal intermediaries (such as Blue Cross) to carry out the routine administrative functions prescribed under Part A.

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Under the supplementary medical insurance package (Part B), reimbursable services are paid on a "reasonable charge" basis rather than the reasonable cost basis used in Part A. Part B services cover physicians' and other medical services, out-patient services, and home health services that were not incident to hospitalization. Drugs, rather costly items, are not covered under Part B.

Unlike Part A, Part B coverage is based on voluntary enrollment and is contingent upon the payment of a monthly premium. Included is a deductible clause presently set at $60 per year and a 20 per cent co-insurance provision. One-half of the monthly premium is paid by the enrollee and is generally deducted from his monthly Social Security check, while the Federal government matches equally this amount from general tax revenues.

At the start of Medicare, the monthly premium paid by the enrollee was $3, matched with $3 from the Federal Treasury, a combined premium of $6. That was nine years ago and this premium has increased more than 100 per cent. The enrollee's present monthly premium is $6.70 with the combined premium being $13.40. Presumably, this premium will continue to rise because it is determined yearly and is based on expenditure increases incurred during the prior year.

The $60 deductible and 20 per cent co-payment represent still other out-of-pocket outlays for the enrollee, the latter of which will continue to climb with increasing medical costs.

West Virginia Per Capita Reimbursement

What is the reimbursement experience of West Virginia's medicare enrollees? How does it relate to the rising costs of the program, particularly the Part B monthly premium?

Table 1 gives the average per capita monthly reimbursement rates under Parts A and B for the years 1966-71. West Virginians received the lowest Part B reimbursement in the nation per enrolled person per month during each of these years. Although substantial percentage increases in reimbursement occurred in both West Virginia and the rest of the United States, there has been a gradually increasing lag between West Virginia and the nation's average per capita reimbursements. The average Part B per capita amounts reimbursed to West Virginians ranged from 49 per cent to 62 per cent of the national average; in addition, they were considerably below the national monthly premiums.

Looking at this problem in terms of total dollar amounts reimbursed yearly for the enrolled population of West Virginia, SSA statistics indicate that during 1971 the total amount reimbursed in West Virginia for covered services used by 195,779 Part B enrollees was $9,685,784, or $4.12 per enrollee per month. The amount West Virginia could have expected for its enrolled population, however, based on the average amount ($8.35 per month) reimbursed for all enrolled persons in the nation, was $19,617,056. This represents an annual difference of $9,931,272. If the expected amount, based on the national average for each year, is accumulated for all of the years 1966-71, the total deficit is a staggering $35.75 million.

The data for Part A (Table 1) also show West Virginia to be below average in per capita reimbursements. Although the percentage deficits are not as dramatic as in Part B, the absolute dollar deficit when compared to the national average is even more staggering since dollar outlays for Part A are three to four times greater. In 1971, for example, there were 201,023 West Virginia enrollees in Part A who received an average monthly reimbursement of $15.99, some $5.85 less than the national average of $21.84. This accumulates to a total deficit of $14,111,815 for 1971. If the expected amount for Part A, based on the national average, is accumulated for all years 1966-71, the total deficit is $55.6 million.

Table 2 ranks the states according to the Part B monthly average reimbursement per enrollee per month for 1971. Only 12 states and the District of Columbia show monthly reimbursements above the national average of $8.35, with California leading the others with an average monthly per capita reimbursement of $12.56. Other states above the U. S. average in descending order of payment are New York, Florida, District of Columbia, Nevada, New Jersey, Rhode Island, Alaska, Arizona, Massachusetts, Colorado, Texas and Hawaii. This list includes some of the most industrialized and most populated states in the country. Interestingly, it also includes two states that are uniquely under-populated (Nevada and Alaska).

At the bottom of this list we find 11 states with an average monthly reimbursement per enrollee of below $6. *Only West Virginia has an average per capita reimbursement below $5.* Its 1971

TABLE 1

Medicare Parts A and B

West Virginia vs. United States

Average Monthly Reimbursement per Enrollee 1966-71[1,2]

	HOSPITAL PART A			SUPPLEMENTAL PART B***		
	U. S.	*W. Va.*	*W. Va. Rank** From Top*	*U. S.*	*W. Va.*	*W. Va. Rank** From Top*
*1966-67	$16.76	$13.51	41	$4.08	$2.52	51
1968	16.09	12.49	41	6.76	3.94	51
1969	17.99	14.21	39	7.27	4.31	51
1970	19.67	14.27	48	7.81	4.49	51
1971	21.84	15.99	46	8.35	4.12	51

*18 months

**Including District of Columbia

***Reimbursements under supplementary medical insurance (SMI) to group practice prepayment plans dealing directly with the Social Security Administration, such as UMWA, totaling $27 million in 1971, are excluded from the reimbursement data.

average per capita reimbursement was $4.12. Although the nation as a whole has experienced premium and deductible increases as described earlier, this figure represents a *drop* in West Virginia per capita reimbursement as compared to the previous year. The remaining 10 states in the order of increasing reimbursement are North Carolina, Kentucky, South Dakota, South Carolina, Virginia, Iowa, Ohio, Wyoming, Arkansas and Tennessee. These states tend to be predominantly rural, and eight of the 11 in this category of low reimbursement are in the Appalachian Region.

TABLE 2

Medicare Part B—Supplementary Medical Insurance: Average monthly reimbursement per person, by State, 1971[1,2]

Rank	*State*	*Monthly Average per person enrolled*
1	California	$12.56
2	New York	11.26
3	Florida	10.89
4	District of Columbia	10.41
5	Nevada	10.33
6	New Jersey	9.96
7	Rhode Island	9.87
8	Alaska	9.79
9	Arizona	9.49
10	Massachusetts	9.30
11	Colorado	9.22
12	Texas	9.17
13	Hawaii	8.42
14	Oklahoma	8.30
15	Connecticut	8.21
16	Michigan	8.08
17	Washington	8.06
18	Georgia	8.01
19	Pennsylvania	7.83
20	Maryland	7.60
21	New Mexico	7.59
22	Minnesota	7.33
23	Illinois	7.29
24	Vermont	7.27
25	Delaware	7.25
26	Kansas	7.10
27	Missouri	6.94
28	Nebraska	6.91
29	Alabama	6.84
30	Montana	6.81
31	Oregon	6.73
32	Wisconsin	6.66
33	Louisiana	6.51
34	Idaho	6.48
35	Utah	6.46
36	New Hampshire	6.34
37	Indiana	6.33
38	North Dakota	6.23
39	Mississippi	6.07
40	Maine	6.01
41	Tennessee	5.97
42	Arkansas	5.96
43	Wyoming	5.95
44	Ohio	5.90
45	Iowa	5.88
46	Virginia	5.49
47	South Carolina	5.38
48	South Dakota	5.34
49	Kentucky	5.26
50	North Carolina	5.25
51	West Virginia	4.12

Table 3 shows variation of county reimbursement in 1971 within West Virginia. All 55 West Virginia counties had average monthly reimbursement rates well below the national average of $8.35. Average per capita monthly reimbursements ranged from $6.62 in Summers County to less than three dollars in McDowell, Gilmer, Upshur, Lewis and Preston counties. There were only six counties with per capita reimbursements over five dollars: Summers, Cabell, Hancock, Taylor, Kanawha and Lincoln. There were 36 counties whose per capita monthly reimbursement was below four dollars. These counties have few cities with populations over 10,000.

Factors Associated With Low Reimbursement

Reimbursement reflects expenditure, and expenditure is a product of price multiplied by utilization (the number of times that priced service is used during the expenditure period). These two factors must be examined separately.

One might conclude that to restore reimbursement to the national average, physicians need only to double their charges. It would appear, however, that the problem is one more of utilization than of price charged. Data from the American Medical Association,[3] for example, show that in 1971 the average fee for a visit to a general practitioner in the U. S. was $6.93, while the fee in the Middle Atlantic states was $7.52. In the South Atlantic states, which include West Virginia, it was $6.73. West Virginia is usually somewhere in between the two regional averages and, therefore, is probably close to the national average in this price factor. The regional differences, approximately of the same magnitude, exist for specialty office visits as well.

Medicare records of Part B show that the average charged by the physician for a service—and this included surgery, consultation, etc.—was $12.96 for the United States and $10.76 for West Virginia in 1969. (SSA allowed "reasonable charges" for Part B were $12.15 and $10.64, respectively[4]). Thus, the price factor is about 12.4 per cent off the national average.

Lower charges can in part be traced back to the economic conditions that existed in West Virginia in 1966 when Medicare began. At that

time, West Virginia was emerging from a serious economic recession. Its ability to purchase health care was seriously eroded, particularly in the rural areas. Because of the relative lack of third-party sources of payment for physician services,

TABLE 3

Medicare Part B—Supplementary Medical Insurance: Number of persons enrolled, total and average monthly reimbursement per person, by West Virginia Counties, 1971[1]

Rank	County	(1) No. of Persons Enrolled	(2) Total Reimbursement	(2) (1) x 12 Monthly Average Per Person Enrolled	Expected Reimbursement Based On U. S. Average Of $8.35
1	Summers	1,907	$ 151,527	$6.62	$ 191,081
2	Cabell	13,660	925,709	5.65	1,368,732
3	Hancock	3,706	241,439	5.43	371,341
4	Taylor	2,050	128,999	5.24	205,410
5	Kanawha	22,579	1,386,243	5.12	2,262,416
6	Lincoln	1,969	120,183	5.09	197,294
7	Marshall	3,969	231,483	4.86	397,694
8	Putnam	2,142	122,249	4.75	214,628
9	Berkeley	3,708	203,377	4.57	371,542
10	Wayne	2,965	159,784	4.49	297,093
11	Morgan	995	53,088	4.45	99,699
12	Wetzel	2,657	134,708	4.37	266,231
13	Wood	8,664	453,068	4.36	868,133
14	Mineral	2,563	132,885	4.32	256,813
15	Greenbrier	4,142	209,006	4.21	415,028
16	Grant	1,006	50,270	4.16	100,801
17	Brooke	2,405	119,531	4.14	240,981
18	Clay	1,113	54,550	4.08	111,523
19	Mason	2,402	116,699	4.05	240,680
20	Barbour	1,985	94,711	3.98	198,897
21	Harrison	9,761	465,691	3.98	978,052
22	Pocahontas	1,291	61,480	3.97	129,358
23	Calhoun	1,000	47,497	3.96	100,200
24	Pendleton	995	47,082	3.94	99,699
25	Hampshire	1,339	63,166	3.93	134,168
26	Pleasants	751	35,272	3.91	75,250
27	Ohio	8,695	408,292	3.91	871,239
28	Jefferson	1,897	89,021	3.91	190,079
29	Raleigh	8,001	363,455	3.79	801,700
30	Roane	2,002	89,562	3.73	200,600
31	Monroe	1,814	80,600	3.70	181,763
32	Mingo	3,573	158,644	3.70	358,015
33	Randolph	3,148	138,869	3.68	315,430
34	Tyler	1,245	54,709	3.66	124,749
35	Tucker	1,037	45,085	3.62	103,907
36	Ritchie	1,713	73,629	3.58	171,643
37	Logan	4,237	182,032	3.58	424,547
38	Mercer	7,480	317,515	3.54	749,496
39	Fayette	6,715	276,516	3.43	672,843
40	Boone	2,491	102,291	3.42	249,598
41	Jackson	1,907	78,284	3.42	191,081
42	Doddridge	802	32,921	3.42	80,360
43	Monongalia	5,656	229,740	3.38	566,731
44	Hardy	1,040	41,712	3.34	104,208
45	Wirt	626	25,021	3.33	62,725
46	Webster	1,383	54,927	3.31	138,577
47	Marion	8,381	332,195	3.30	839,776
48	Wyoming	1,956	74,975	3.19	195,991
49	Nicholas	2,310	88,149	3.18	231,462
50	Braxton	1,796	64,675	3.00	179,959
51	Preston	3,036	102,814	2.82	304,207
52	Lewis	2,866	95,344	2.77	287,173
53	Upshur	2,342	77,441	2.76	234,668
54	Gilmer	1,006	31,793	2.63	100,801
55	McDowell	4,816	145,572	2.52	482,563
	Total West Virginia	195,779	$9,685,784	$4.12	$19,617,056

customary and prevailing charges reflected what people could afford to pay.

Although substantial percentage increases have occurred in West Virginia's reimbursement under both Part A and Part B, these increases have not kept up with comparable increases occurring at the national level.

The relative lack of medical specialists, particularly in our rural areas, also is a factor contributing to lower charges. In addition, there is a possibility that the manner in which reimbursement areas are delineated by the Part B carriers may be contributing to variations in price.

The disparity between monthly Part B premiums and monthly per capita reimbursements can in part be traced to the Medicare law. Public Law 89-97 requires the Part B *premium* to be the same *nationally* but that *reimbursements* be made on a *regional* basis. Reimbursements are based on "reasonable charges" for a specific service within a defined service area. Presumably, the rest of the difference in reimbursement is due to utilization. In analyzing reasons for variation in utilization, it is important to distinguish between biological and other determinants of utilization.

It is generally recognized that the older one gets, the more chronic conditions one has and the greater is the need for medical care. Age, therefore, is one such biological determinant of utilization. Sex is another biological determinant, with females generally using more health services than males in the over-65 age group. West Virginia's population over 65 is slightly older than the U. S. average for this age group and it contains more females than males.[5] When compared with the rest of the nation, these characteristics should lead to higher utilization and higher reimbursements. Thus, West Virginia's unusually low reimbursements cannot be ascribed to the age or sex differences of its population. We need to look at other factors for some satisfactory explanation.

Table 4 gives statistical data[6] that help explain West Virginia's low Part B Medicare reimbursement. These data pertain to the years 1967-69 only. They relate reimbursements to persons served rather than to the total enrolled population as did the preceding tables. They suggest that low per capita reimbursements may be traced to those enrollees *not* being served. The data in Table 4 show that approximately 20 to 25 per cent fewer West Virginia Medicare enrollees per 1,000 filed reimbursable Part B claims as compared to other states' enrollees; and that

TABLE 4

Medicare—Part A and Part B
Persons Served/1000 Enrollees and Reimbursement Per Person Served
West Virginia and U. S. 1967-69[6]

	1967			1968			1969		
	W.Va.	*U.S.*	*Ratio W.Va./U.S.*	*W.Va.*	*U.S.*	*Ratio W.Va./U.S.*	*W.Va.*	*U.S.*	*Ratio W.Va./U.S.*
Part A—Hospital									
Persons Served /1000 Enrollees	218.4	186.7	1.17	233.7	200.3	1.17	230.7	206.9	1.12
Reimbursement/Person Served	$545	$740	.74	$620	873	.71	$694	$955	.73
Part B—SMI									
Persons Served/1000 Enrollees	279.7	359.7	.78	294.2	378.8	.78	309.8	417.6	.74
Reimbursement/Person Served	$156	$191	.82	$151	$198	.76	$157	$201	.78

West Virginia reimbursements per person served were approximately 25 per cent lower than those for the other states' enrollees.

Table 4 also shows the interdependence between Part A and Part B reimbursements and indicates that conclusions should not be drawn about Part B reimbursements without also considering the use of Part A services. The limited Part A data presented indicate that approximately 20 per cent more West Virginians per 1,000 enrollees use in-patient hospital services than the other enrolled states' population, and that Part A reimbursement per person served is approximately 70 per cent of the U. S. reimbursement per person served.

Discussion

How does one interpret the fact that 25 per cent fewer West Virginians than other United States' residents were served under Part B during the years 1967-69? It could mean that fewer West Virginians accumulated sufficient charges to exceed the Part B deductible, or it could mean that some persons may have exceeded the deductible but failed to file claims. If the former were the case, the fact that fewer persons were served could have been due to their lack of need, lack of recognition of need, or inability to obtain health care. The inability to obtain care could have been caused by the lack of services, lack of access, or the inability to pay the Part B deductible.

There is no evidence to support the hypothesis that West Virginia's elderly are healthier than those in other states. Although West Virginia's disability and chronic condition prevalence data are not available, the national studies by region show that the more rural, especially southern and especially non-farm elderly, have an increasingly greater prevalence of chronic conditions, limitation of activity, bed disability days, and hospital discharges (a utilization rate which is probably closer to medical "need" than most).[7,8] Refer to Table 5.

Death rates in West Virginia by age group are slightly higher than the nation's death rates from older age groups,[9] as illustrated in Table 6.

TABLE 5

Illness and Medical Care Utilization Characteristics of People Over Age 65 in the U. S. and Selected Geographic Areas 1963-1965[7] and 1966-67[8]

	% Total With 1+ Chronic Condition 1963-65	% With Limitations of Activity 1963-65	Bed Disability Days Per Person, Per Year 1963-65	Discharges From Short Term Hospital Per 1000, Per Year 1963-65	No. Physician Visits Per Person, Per Year 1966-67
All Regions	82.8	48.8	14	186.3	6.0
Non-Farm Rural	86.9	56.2	17.5	224.5	5.5
Southern Region (including W. Va.)	87.8	59.6	19.4	214.2	5.8
Southern Non-Farm Rural (including W. Va.)	90.7	65.2	23.0	257.9	

TABLE 6

Death Rates per 1,000
United States and West Virginia, 1972[9]

Ages	*U. S.*	*W. Va.*
65-74	35.5	41.3
75-84	79.0	87.9
85 and over	162.2	189.6

Perception of the need for medical services has not been studied in West Virginia, but other studies have demonstrated that in lower socio-economic groups, living in rural areas and having attained a lower level of education, there is a greater resistance to identify symptoms as "problems" and to seek medical care.[10,11]

A relative lack of medical resources in West Virginia has been well documented, with 1,002 people per physician as compared with the national average of 883 people per physician.[12] Additionally, many areas in West Virginia have been designated as having a health manpower shortage by the U. S. Public Health Service.

Lack of medical access due to personal as well as geographic (poor roads, lack of public transportation, etc) isolation has also been documented. Studies also show the rate of utilization of medical services is inversely proportional to the distance one has to travel to get to them.

Personal economics probably play a major role in utilization. The elderly, despite Medicare, still pay 50 per cent of their medical bills out of their pockets.[13] This percentage includes the Medicare deductible and co-insurance, pharmaceuticals, dentistry, and other costs not covered by other programs. For the poor, the first $60 deductible looms as a major barrier to utilization.

The average income for the over-65 West Virginian was only $1,180 in 1969 as compared to the national average of $1,545 for this age group.[14]

Difference in frequency of visits to a physician varies with income. Nationally, the elderly in 1970 saw a physician 6.3 times if they were of low income, 6.4 times if of middle income, and 6.7 times if of high income. If the rural experience is differently expressed, only 75 per cent of the low income elderly saw a physician during 1970, while 90 per cent of those in the middle income bracket did. Rurality apparently compounds low income to reduce utilization.[15] Again, while West Virginia visit data is not available, the income distribution of our elderly, particularly rural, is heavily weighted toward the lower end.

That some part B enrollees may have exceeded the deductible but failed to file a claim may be attributed to the complexity of Medicare billing procedures and the relative inability of aged West Virginians to deal with health insurance forms. This may be a reflection of the unique characteristics of West Virginia's predominantly rural population. Due to the loss of large numbers of the working age population in the 1950's and early 1960's, our aged rural residents are more often found living alone without the support of family members and neighbors. They are geographically isolated and less likely to have access to private and public transportation. They are also less likely to seek and obtain the services of social agencies. All of these factors could be contributing to their inability or reluctance to file Medicare claims.

There are similar considerations relating to the rural physician that may also be adding to this problem. He is older, more over-worked, and less likely to be organized to carry out administrative details. He prefers spending the little time he can devote to each patient to taking care of that patient, rather than wading through government forms. He is used to patients paying him a fee, or "what they can," at the end of each visit. He prefers this to the frustration of billing government agencies that constantly bounce back his bills; consequently, he is less inclined to accept Medicare assignments. Only 56 per cent of office-based, non-prepaid physicians accepted Medicare assignments in West Virginia in contrast to 90 per cent for the nation, and our percentage is falling.[16] Thus, the burden of establishing reimbursement status and collecting Medicare reimbursements falls on the patient himself, often a confused and unassisted aged beneficiary. Whether or not these generalizations are valid or have bearing on reimbursement data should be investigated.

Conclusion

Although all the reasons for the wide differences in reimbursement rates are not yet clear, it remains a fact that the elderly Part B premium payers of the low reimbursement areas, generally rural and low income persons, are unwittingly subsidizing the beneficiaries of the high reimbursement areas.

The likelihood of a National Health Insurance program that will feature insurance carriers, deductibles, and co-insurance makes further investigation of West Virginia's low Medicare reimbursements imperative. When its entire population is covered by National Health Insurance, is West Virginia to expect losses in per capita reimbursement similar to those it is currently

experiencing under Medicare? To the extent that current reasonable charges reflect the reduced ability to pay of that segment of our population not adequately covered by health insurance and not able to pay the full cost of their care, it is reasonable to expect reimbursements to improve with increased health insurance coverage. If, however, as is suggested by this paper, our low per capita reimbursement is due to factors associated with inability to meet the deductible, it seems reasonable to expect similar losses under any form of National Health Insurance—at least under those proposals currently being considered.

Other questions that seem relevant are: What degree of our inability to recruit physicians in rural areas is due to the lack of health insurance coverage and to low Medicare reimbursements? What proportion of this problem is due to the lack of an effective health care delivery system? To what extent are these questions mutually related?

These are questions that need to be explored and better understood in order to improve the health care of West Virginians, especially *before* a National Health Insurance program is enacted.

A list of references may be obtained by writing The Journal.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

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Felty's Syndrome

Discussants: Irving Kushner, M. D., and James E. Richey, M. D.

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Case Presentation

The patient is a 34-year-old woman admitted for treatment of a leg ulcer which began one year previously after a snake bite. On admission a year ago she gave a history of persisting polyarthritis for four years. Physical examination at that time showed synovitis of the hands consistent with rheumatoid arthritis, a spleen palpable at 3 cm. below the costal margin, and a punctate lesion surrounded by erythema on the right leg. Her white blood count was 2700 and hemoglobin was 10 grams/dl.

The lesion improved during her hospitalization, but after discharge it slowly developed into a large ulcer. She was advised on several occasions to care for the ulcer by applying soaks and avoiding ambulation, but she followed directions poorly.

During her current admission the spleen was 4 cm. below the costal margin and the ulcer on the right leg measured 8 x 10 cm. The rheumatoid factor was positive at a titer of 1:1280. The antinuclear antibody (ANA) was negative. White blood count was 2400 with 38 per cent segmented neutrophils and 11 per cent bands. The hemoglobin was 8.3 grams/dl.

Because of the neutropenia, a splenectomy was performed, yielding a spleen weighing 700 grams. The white blood count improved, rising to 6100 post-operatively (Table 1).

Irving Kushner, M. D., Professor of Medicine; Chairman, Division of Rheumatology, West Virginia University Medical Center.

Discussion

I would first like to make a few minor points about this patient. Before splenectomy was recommended she was being treated in a fairly classical manner with little success. Most of these patients require splenectomy to heal the ulcer. I hope it proves successful in this case.

She had a serum iron of 20 mg. per cent and iron binding capacity of 305 mg. per cent. These values are consistent with iron deficiency anemia which the absence of iron in the bone marrow also suggested. The total iron binding capacity is moderated, perhaps, by chronic inflammation.

In 1924 A. R. Felty, a physician at Johns Hopkins, presented five patients with chronic arthritis, an enlarged spleen, and leucopenia as an unusual syndrome. In 1932 the term, "Felty's syndrome," was employed and splenectomy was performed to treat it. Over the years it has been accepted that this syndrome is secondary hypersplenism in severe rheumatoid arthritis. It is seen in one per cent or less of rheumatoid patients. A few more women than men have it, which is a bit unusual compared to most of the other severe extra-articular manifestations of rheumatoid arthritis. The picture as a whole is pretty much as described by Felty: the basic triad plus a number of other findings which he noted.

Generally the patients have rheumatoid arthritis of some duration, at least four or five years, and often much longer. "Primary splenic neutropenia," however, has been diagnosed several years before the development of rheumatoid arthritis, and just recently a patient was reported who had leucopenia, an enlarged spleen, a high rheumatoid factor, and *no* arthritis.[1] The spleen may not be palpable, but it generally can be detected as being enlarged on x-ray. A number of spleens have been removed which were enlarged but which were not palpable.

TABLE 1

		WBC	*Bands*	*Segmented Neutrophils*	*Platelets*	*Hemoglobin*
July, 1973	Snake bite	2,700	12	12	"Adequate"	10.0
June 12, 1974	Leg ulcer	2,400	11	38	390,000	8.3
July 1, 1974	Splenectomy					
July 2, 1974	1 day post-surgery	6,100	45	35		9.9
July 5, 1974	4 days post-surgery	6,300	15	46	842,000	9.7

The definition of neutropenia which is in current use is a neutrophil count of less than 2500 cells/mm.[3] There is no doubt about neutropenia in our patient today since she had about 600 neutrophils/mm.[3] when first seen. It is not uncommon for these patients to run between 500 and 1000 neutrophils. Most of the time the patients come to our attention because of the associated infection which leads to a physical examination, lab studies, and the proper diagnosis.

In addition to the basic triad other features are found. Anemia may occur. It is not generally felt to be due to the splenomegaly since, as we know, patients with rheumatoid arthritis have many reasons for being anemic. They have chronic inflammation, they have a defect in iron metabolism, and they have problems with folate metabolism. It is not certain how much the enlarged spleen is contributing to the anemia. However, it may improve after splenectomy.

Thrombocytopenia

Only about 20 per cent of the people with Felty's syndrome have thrombocytopenia. The platelet count is usually not very low. It is rarely much below 100,000, and very rarely indeed does it produce clinical manifestations (some people say never). Thrombocytopenia is not a hallmark of this condition.

These patients will tend to have prominent lymphadenopathy which, of course, one sees in rheumatoid arthritis patients anyway. They will tend to have hyperpigmentation, but I don't know why. They will have weight loss, malaise, and often a relatively progressive rheumatoid arthritis over the year prior to onset of the Felty's syndrome. In a few cases cirrhosis has been reported in association with the syndrome.

Fifty per cent of the patients have leg ulcers, just as this patient did. These ulcers are sometimes the result of infection, but a culture may be negative. Pneumonia, oral ulcers, and various infections are also seen.

Lastly, most of these Felty's syndrome patients will have the usual associated problems of severe rheumatoid arthritis. Fifty per cent will have Sjogren's syndrome and about 85 per cent have rheumatoid nodules. They will have the serologic findings that one expects in severe rheumatoid arthritis. The rheumatoid factor will be positive in virtually all, and it will be postive in high titer. Antibodies to nuclear constituents will be found in about 80 or 90 per cent of these patients, and it is the unusual patient with Felty's syndrome who lacks these antibodies. These patients will tend to have moderately low or sometimes frankly depressed complement levels, suggesting the presence of circulating immune complexes. Many of them, but certainly not all, will have a particular kind of antinuclear antibody (ANA) directed against the nuclei of granulocytes only. This finding is in contrast to the usual ANA which will react with the nuclei of virtually any species and any tissue. Obviously, some consideration has to be given to the possibility that these antibodies themselves are responsible for the neutropenia, but this possibility is not gaining wide acceptance.

Bone Marrow Findings

This patient's bone marrow findings are typical. There was hyperplasia of the myeloid elements with maturation arrest of the neutrophil constituents. Some patients show marked aggregates of lymphocytes and at times will have 60 to 80 per cent lymphocytes in their aspirates, the number presumably depending on the site of the aspiration. Since we know that lymphocytes are immunocompetent cells, we may conclude that something immunological is happening in the marrow.

The leg ulcer may, as indicated, be related to something besides infection. In some patients it is clear that the ulcers are a manifestation of necrotizing vasculitis, another one of the extra-articular complications of severe rheumatoid arthritis. Sometimes there is no vasculitis either, and there is no clear explanation for the ulcer.

Understanding the pathogenesis of this syndrome was previously easier than it is now. We can say that the patients have hypersplenism, but no one really knows what that means. The two competing viewpoints of the Doan and the Dameshek schools of thought persist: either the circulating cells are sequestered and destroyed in the spleen or the spleen is producing something which is suppressing marrow production of white blood cells. There are reasons to believe that either or both of these mechanisms may be playing a role. It may well be, however, that the spleen is not the whole story and that extra-splenic factors may be important in Felty's syndrome. This view is supported by a variety of clinical observations. While something like five per cent of patients with rheumatoid arthritis syndrome have enlarged spleens, only 20 per cent of those, at most, will develop Felty's syndrome. Perhaps it takes a little more than just having a big spleen.

There is no relationship between splenic size and the degree of neutropenia. Splenectomy does not always correct the neutropenia. In some patients the ulcers persist even if white blood counts return to normal following splenectomy, while in others the reverse occurs. So it is a complex business. Recently it has been suggested that there is a qualitative defect in the white cells of these patients as well as a quantitative one.[2]

Number of Studies

There are a number of studies, most of them recently reported at the Pan American Congress of Rheumatology in Toronto,[3] which may be of help in understanding this condition. First of all, there are kinetic studies. While a rare instance of increased white blood cell destruction has been noted, in many patients the major finding was inability to release marrow reserves of white blood cells into the circulation upon stimulation. This defect was corrected by splenectomy. However, subsequent infusion of the patient's own plasma, donated prior to splenectomy while the patient had the neutropenia, restored the abnormal state and the defect in available marrow reserves. One can ask, is there a circulating neutropenia-producing factor of splenic origin?

Secondly, several circulating factors which might affect circulating neutrophils have been implicated. Patients with Felty's syndrome will frequently have cryoglobulins. Cryoglobulins are looked upon as either immune complexes or as aggregates of immunoglobulins. In these patients the cryoglobulins frequently contain anti-granulocyte antinuclear antibodies. Similarly, such antibodies may be found in serum. Do these antibodies affect white blood cells in some patients?

Does the ingestion of immune complexes affect the white cells? Large inclusions are found in these patients' granulocytes containing immunoglobulins and complement, thus implying that these white cells have ingested circulating complexes. Exposure of normal white cells to serum from these patients results in production of similar cytoplasmic inclusions. Does this render the white cells ineffective, or injure them so that they are readily removed by the spleen?

Lastly, abnormal white cell functioning has been shown. While normal granulocytes greatly increase migration and chemotaxis in response to supraphysiologic concentrations of ascorbate, Felty's syndrome granulocytes do not. All of these leads have not been correlated as yet, but a picture emerges of abnormal white cells, circulating factors (perhaps immune in nature), and abnormal release of marrow reserves. Perhaps different mechanisms are involved in different patients.

Treatment

How do we take care of patients with this syndrome? The one thing we do know is that steroids have been proven worthless in helping the white count and helping the infection. The results of splenectomy are variable. What one would like to see, and does see in about two-thirds of the patients, is a permanent return to normal white blood cell levels. One may see a transient white count rise with a return to neutropenia over the next few weeks or months. These two types of responses are seen in a high percentage of patients. In a small percentage the third alternative will occur, namely, nothing. In general, the leg ulcers, the anemia, and thrombocytopenia will improve after splenectomy. Occasionally a patient is seen whose arthritis gets much better for a prolonged period of time after splenectomy, and I have seen a patient who had a persisting fever of 39° C or so for weeks which disappeared with splenectomy. The spleen may be doing all sorts of strange things that we really do not understand. There is one report[4] of two patients who were given testosterone for two years which raised their white counts after 20 months or so. I don't know what that means, or how useful it is.

It seems unnecessary to operate on everybody with Felty's syndrome. If the patients are managing to get along, leave them alone. Patients who should have splenectomy are the people who have severe, unremitting leg ulcers (as our pa-

tient did) and people who have trouble with severe infections of other kinds. It is not appropriate to operate in the absence of clinical manifestations merely because the diagnosis is made or for the leucopenia, the anemia, or the thrombocytopenia. Some people suggest that splenectomy be performed for absolute granulocyte counts less than 1000/mm.^{3} or to relieve the metabolic burden of a large spleen. I don't find this a particularly appealing suggestion. A good number of the patients don't need surgery, don't need therapy of any kind, and will get along reasonably well.

Summary

Felty's syndrome (rheumatoid arthritis, splenomegaly, and leucopenia) is one of the manifestations of severe rheumatoid arthritis, frequently seen in company with Sjogren's syndrome, rheumatoid nodules, high rheumatoid factor titers and high antinuclear antibodies. Anema is frequently seen as are severe or repeated infections and leg ulcers. Treatment with corticosteroids is worthless. Splenectomy appears to result in a return to normal white blood cell levels in about two-thirds of the patients. The pathogenesis of this condition is not clear, but abnormal release of granulocytes into the circulation and a possible effect of circulating factors leading to the leucopenia have been implicated.

Suggested Further Reading

1. Crosby, W. H.: What to treat in Felty's syndrome. JAMA 225:1114-1115, 1973.
2. Editorial: Felty's syndrome. Brit. Med. J. 2:379-380, 1971.

A list of references may be obtained by writing The Journal.

Risk In Excessive Sun-Tanning

THE medical case against sun-tanning received further verification with a report that ring-shaped, inflammatory lesions sometimes develop in tissues of skin that have been damaged by sun and heat.

The lesions, which commence as papules and nodules, enlarge very slowly and may persist for years, said John P. O'Brien, M. D., of Sydney, Australia, in a report in a recent issue of *Archives of Dermatology*, a publication of the American Medical Association.

The disorder occurs on several continents, including North America, Doctor O'Brien observes.

"Perhaps the traumatic effects of long-term radiant heat on the dermis have been underestimated and the layman's expressions 'sunburn' and 'sunbaking' are more apt than we realize," he declares.

The lesions are known medically as actinic granuloma. The condition was first recognized in 1964.

Actinic granuloma typically affects the exposed, weatherbeaten skin of patients who are at least 30 and usually 40 years old or more.

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Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

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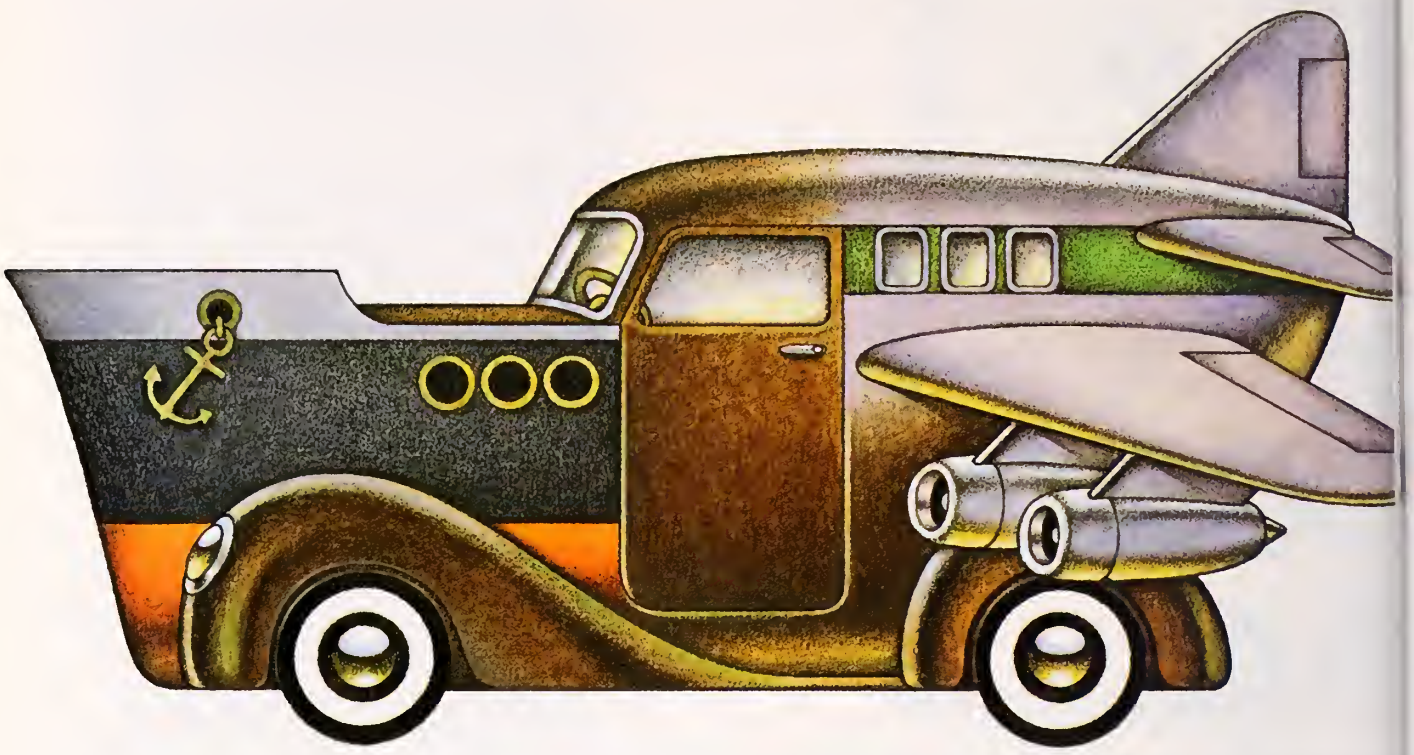

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

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A message from . . .

The President

BURY THE HATCHET

At this writing, the West Virginia State Medical Association is on the starting block at the Annual Convention of the American Medical Association in Atlantic City. There is urgent preliminary discussion of many topics on every corner of Boardwalk City.

Of underlying interest to most physicians is their concern about the professional liability insurance question and the recent legislative changes that have come about in many states across the land. There have been differing approaches to the problem, but all hats are off to the citizens of Indiana and the Indiana State Legislature who, with counsel from the Indiana State Medical Association, have achieved significant changes in liability legislation. The "malpractice" crisis in Indiana would appear to be well on its way to solution.

There are lessons for West Virginians to learn. We must recognize that patients, physicians, attorneys, insurers, and legislators, be they active or inactive, *all* have contributed to the current threatening liability crisis. It is equally obvious that, sooner or later, the expenses of providing contract services will be borne by the patient receiving these services. The only reasonable conclusion, therefore, is that all who have contributed to the professional liability dilemma *separately*, must now work together to correct this consuming problem.

In an attitude of mutual concern, then, let us join potential patients, attorneys, insurers and legislators to alter the constant, threatening environment in providing good health care. Indiana has cleared a path through the forest. Before the next litter of wolves is born, West Virginians must move promptly to take advantage of the opportunity to assure good health care at reasonable expense in a climate of good will.

Bill Gilmore

William E. Gilmore, M.D., *President*

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EDITORIALS

STATE IN THE CELLAR FOR MEDICARE REIMBURSEMENTS

Elsewhere in this issue of the *Journal* (Page 170) is a Special Article on "What Is Happening To West Virginia's Medicare Dollars?" It was prepared by Lydia S. Aston, R.N., M.P.H.; John M. Krall, Ph.D.; and Walter A. Morgan, M.D., all at West Virginia University. The article gives detailed, analytical information concerning the distribution of the Medicare dollar in the United States, in the State of West Virginia, and in all counties in West Virginia.

It has been a cause of great concern that reimbursements for physicians in West Virginia have repeatedly been the lowest in the nation. In 1966-71, West Virginians received the lowest average monthly Part B reimbursement per enrolled patient; and the average monthly reimbursement to West Virginians for each of those years ranged from 49 per cent to 62 per cent of the national average.

Maybe the medical message has not been made clear in our hinterlands because the states with the lowest reimbursement are predominantly rural. It is not a matter of patient affluence, because eight of the lower 11 states are in the Appalachian area, which is not the most prosperous section of the United States.

Some of our neighbors are in a low reimbursement category, but Pennsylvania and Maryland are at a much better level. The drop in average reimbursement from North Carolina, which is No. 50, to West Virginia, which is No. 51, is more than one dollar per enrollee per month, so we are really in the cellar.

Could it be that the elderly population of West Virginia is healthier and more disease-resistant than the rest of the nation? Could this be an integral quality of the Mountaineer? Hardly—mortality and morbidity statistics do not confirm this possibility. It could not be due to a superior environment because the State has, in some sections, a high dirt, dust and pollution factor.

Communication is not the answer. We have a rapidly improving road system and, more and more, even our remote hollows and ridges are within a few miles of a good road. Many areas of West Virginia have an excellent ambulance service, so the trip to the clinic or community hospital is not over an hour.

The physician shortage is not so great as the general clamor indicates. The ratio of family physicians to specialists is more favorable in West Virginia than for the whole United States. The cry for physicians for rural areas will continue, but the future of rural medicine lies in the transportation of the sick and ailing to community centers. Neither private medicine nor public health will take the physician to highly rural, sparsely populated areas for permanent residence.

It is the opinion of this writer that the medical fees in West Virginia are unusually low and this contributes to the low reimbursement figure. In almost every community in the State, the fees of newly established physicians far exceed the fees of the older physician population for the same medical service.

Dissatisfaction with the intermediary for Part B leads many physicians to bill directly. The patient can recover most of the cost of this service through Medicare and the physician is not subject to the price-cutting, rigid profile of the third party.

The paper also furnishes the basic evidence for intensive study needed concerning the lack of utilization of medical services by the over-65 age group in West Virginia.

STUDIES ON ETIOLOGY OF PROSTATIC CANCER

It is recognized that cancer of the prostate is the second most common malignant tumor found in the male. Its etiology remains unknown. Any information which might throw light on its possible etiology or which might affect its course demands our serious attention.

Recently Greenwald, et al.,[1] have published interesting observations made on persons afflicted with cancer of the prostate. A study was made in an attempt to ascertain whether men who had a benign prostatic hypertrophy were more likely to develop malignancy of the prostate. Observations were made on 838 patients with benign prostatic hyperplasia and on 802 age-matched controls. The patients were followed for an average of 10.7 years and the controls for 11.2 years. Twenty-four patients and twenty-six controls subsequently developed prostatic cancer, which clearly indicated, in this series at least, that patients with benign prostatic hyperplasia were not at increased risk for prostatic cancer. In this same study no significant differences between patients and controls were found in marital status or in the frequency of bladder cancer, diabetes, drug-use history, family medical history, or in smoking and drinking habits.

In a subsequent article[2] the physical and demographic features of men before developing cancer were studied. Two hundred and sixty-eight men examined while in college, and who later died of cancer of the prostate, were compared to 536 controls. Attention centered on features possibly influenced by hormonal factors before development of the cancer. The anthropometric indexes of features, such as type of body build, masculine characteristics, hermaphroditism, baldness and hairiness were similar for the cancer cases and the controls. Of 107 married men with prostatic cancer, 29 had no children as compared to 49 of 228 controls. In this series the p value was 0.06, which is of questionable statistical significance. It was also observed that there were no significant differences in the proportion ever married, age at first marriage, age at first child, age of last child, or occupation.

On the whole, the findings published by Greenwald, et al., were negative; nevertheless such studies are worthwhile as previously mentioned. Obviously more exhaustive work is needed. Finally, it should be emphasized that since prostatic cancer more frequently occurs after the age of 50, men of that age should have periodic physical examinations to determine whether the prostate gland shows any hyperplasia or particularly any nodularity. A biopsy should be done if any lump or nodule is discovered. This in many instances could be a life-saving procedure.

1. P. Greenwald, et al., J. Natl. Cancer Inst. 53:335, 1974.
2. P. Greenwald, et al., Ibid. 53:341, 1974.

CORONARY DRUG PROJECT

The Coronary Drug Project has just completed a secondary prevention drug trial which began at the intitative of the National Advisory Heart Council 15 years ago.

The conclusions regarding the remaining two of the intial four agents, clofibrate and niacin, are reported in a recent issue of the *Journal of the American Medical Association.*[1] In a follow-up period of at least five years, ranging up to eight-and-one-half years for some patients, neither the clofibrate group nor the niacin group showed a statistically significant reduction on mortality when compared with the placebo group of men.

Furthermore, there was an excessive incidence of thromboembolism, angina pectoris, intermittent claudication and gallstones in the clofibrate group. The niacin group did experience a lesser incidence of non-fatal myocardial infarction than the placebo group but had a greater incidence of arrhythmias, gastro-intestinal problems, elevated serum enzymes, serum uric acid and plasma glucose.

Two other agents had been abandoned by protocol change earlier in the study.[2] Dextrothyroxine was found to have an excess mortality trend in those with frequent ventricular contractions or those who at entry had had one complicated MI, two or more MI's, angina pectoris, more rapid heart rates, elevated diastolic blood pressures or combinations of these. High dose estrogen was associated with an excessive num-

ber of events of non-fatal myocardial infarction, pulmonary embolism and thrombophlebitis.

Low dose estrogen similarly was discontinued by the study group in 1973 because of the absence of a therapeutic benefit and the presence of some unfavorable side effects and undesirable trends.[3]

As a result of this careful study, there has been no demonstration of the hope for benefit of those lipid lowering agents in reducing mortality in men who have had a previous myocardial infarction.

The problem is so enormous, however, in terms of the death rate from myocardial infarction, that the Coronary Drug Project shifted part of its emphasis to a study of aspirin during the last 18 months of its existence. The results of this study will be awaited with interest.

While the search goes on for *the* elusive nostrum, however, it behooves all physicians to continue to combat some of the main risk factors in the etiology of coronary artery disease, namely, sloth, gluttony, cigarette smoking and hypertension.—*Guest Editorial by David Z. Morgan, M. D., Professor of Medicine, West Virginia University Medical Center, Morgantown. Note: Doctor Morgan was requested to write this editorial by the Editor.*

1. The Coronary Drug Project: Clofibrate and niacin in coronary heart disease, Coronary Drug Project Research Group. JAMA 231:360-381, 1975.
2. The Coronary Drug Project: Initial findings leading to modification of its research protocol, Coronary Drug Project Research Group. JAMA 214:1303-1313, 1970.
3. The Coronary Drug Project: Findings leading to discontinuation of the 2.5-mg/day estrogen group, Coronary Drug Project Research Group. JAMA 226:652-657, 1973.

Medical Profession

A lot of people are going to wonder if I haven't gone completely off my rocker at my writing something in defense of the medical profession. Frankly, I feel that if there isn't a vote of confidence of some kind in the doctor, a suppression of the harping and cavilling against the profession, and a way of eliminating court suits and such, we are going to find communities increasingly doctorless.

I have been sparked in my thinking, and in this writing, by a recent television program on the rapidly growing number of malpractice suits, and from things I have been reading here and there in the papers, and from what I have experienced.

Some years ago Bruce Barton shocked a lot of people by devoting his then current column "to two of the most important persons in a community," the family doctor and the garbage collector. He said that both didn't get the respect they were due until they were needed. That isn't quite true because I don't know of any doctor but who rates at the top of the respect list in a community. What Barton meant was that people think of doctors as taking their phones off the hook, charging five dollars for poking their heads in hospital rooms, living off the sweat of their nurses, but when in the time of crisis, when your kid burns with a fever, and old Doc works through the night, you'd give him the shirt off your back.

I know what can be said in answer to all this because I have heard all the stories. But I know that young people are eschewing the profession, that doctors are retiring earlier than ever, and more and more communities go begging for a doctor.

The oath the doctor takes, the kind of life he lives, the conditioning he gets in training, all make him a poor fighter in his behalf. He isn't going to take ads in the Times to ask for understanding and a vote of confidence. In fact, I doubt if there's one of them who will do any more than simply scoff at what I am saying. But if the general attitude toward doctors prevails, they are going to more and more draw into their shells, take fewer risks, live and let die, and quit being hostage to carping ingratitude.—*West Virginia Hillbilly.*

Hot Gas Scalpel

Animal studies at Indiana University have led to the development of what researchers call a "bloodless scalpel" that cuts and cauterizes at the same time. In addition, the scalpel's developers say it is cheaper, lighter and easier to use than the much vaunted laser beam.

In describing the device at a recent College of Surgeons' meeting, Dr. John L. Glover, Professor of Plastic Surgery at the University's Medical Center, said it has been designed for use in highly vascular, blood-rich tissues such as the liver and lungs. The ballpen-size tool emits a partially ionized gas at a temperature of about 5,000 to 8,000 degree Fahrenheit. The high temperature gas stream—either argon or helium, both of which are inert and therefore relatively safe—vaporizes tissue and coagulates blood vessels in a very small area surrounding the incision.

Doctor Glover and his colleagues have been able to cut off whole sections of dog lungs without the use of clamps to stop bleeding. They have observed uncomplicated healing of plasma scalpel wounds in their animal studies, and have found there is no post-operative bleeding at the incision sites in the absence of sutures.

Clinical trials are now being planned, but the Indiana scientists point out that the plasma scalpel is meant to be simply another weapon in medicine's arsenal, not a substitute for conventional instruments.

GENERAL NEWS

Harley O. Staggers Honor Guest At 108th Annual Meeting

The Program Committee arranging the 1975 Annual Meeting is pleased to announce that Congressman Harley O. Staggers has accepted an invitation to be an honor guest at the Association's 108th Annual Meeting which will be held at The Greenbrier in White Sulphur Springs August 20-23.

Dr. Philip M. Sprinkle of Morgantown, Chairman of the Program Committee, said that Congressman

Congressman Harley O. Staggers

Staggers will be the keynote speaker at the first general session on Thursday morning, August 21. Mr. Staggers will deliver "The Thomas L. Harris Address" which was established with a bequest in the will of the late Dr. Thomas L. Harris.

Doctor Harris, Parkersburg surgeon who served as President of the State Medical Association in 1945, established the trust fund in an effort to enhance the quality of the programs for future annual meetings of the Association.

Congressman Staggers, of Keyser, who represents West Virginia's Second District, is Chairman of the Committee on Interstate and Foreign Commerce of the United States House of Representatives. He has served on the Committee since 1951, being elected Chairman in 1966.

Mr. Staggers has served as Assistant Whip in the House since 1955. He formerly was a member of the House Post Office and Civil Service Committee as well as the House Committee on Veterans' Affairs.

Congressman Staggers first was elected to the House in 1948, and has served continuously since that time. He is known as "Dean of the West Virginia Congressional Delegation," with longer service than any other current House member from West Virginia.

Mr. Staggers attended public schools in Mineral County and received an A. B. degree in 1931 from Emory and Henry College in Emory, Virginia. That college later bestowed upon him the honorary degree of Doctor of Laws. He did graduate work at Duke University and also received the honorary degree of Doctor of Laws from Davis and Elkins College, West Virginia University and West Virginia Wesleyan College.

Before entering public service, Mr. Staggers coached and taught in high schools for two years, and later coached at Potomac State College in Keyser. He was elected Sheriff of Mineral County in 1937, and served in that position until 1941.

During World War II, Mr. Staggers served for almost four years in the U. S. Naval Air Corps as a navigator in the Atlantic and Pacific Theaters of War. Married to the former Mary V. Casey of Keyser, he and Mrs. Staggers are the parents of six children.

AMA President Honor Guest

It was announced previously that Dr. Max H. Parrott of Portland, Oregon, will deliver an address at the first session of the House of Delegates on Wednesday afternoon, August 20. Doctor Parrott was installed as President of the American Medical Association during the annual meeting in Atlantic City last month.

Other business sessions during the Annual Meeting will include the Pre-Convention Meeting of the

Council on Wednesday morning, August 20, and the final session of the House of Delegates on Saturday afternoon, August 23. Dr. William E. Gilmore of Parkersburg will deliiver his Presidential Address at the final session.

First General Scientific Session

The first general scientific session on Thursday morning, August 21, will feature a "Symposium on New Concepts in Cancer Diagnosis and Therapy." Dr. Raymond B. Weiss, Associate Professor of Medicine and Chairman of the Division of Medical Oncology at the West Virginia University School of Medicine, will be the moderator.

It was announced previously that the four members of the panel will be Dr. Vincent T. De Vita, Jr., Director of the Division of Cancer Treatment, National Cancer Institute, National Institutes of Health, Bethesda, Maryland; Dr. Paul B. Chretien, Head of the Tumor Immunological Section and Assistant Chief of the Surgery Branch, National Cancer Institute; Dr. Ariel C. Hollinshead, Ph. D., Professor of Medicine at the Laboratory for Virus and Cancer Research, George Washington University School of Medicine, Washington, D. C., and Dr. Arvin S. Glicksman of Providence, Rhode Island.

Doctor Chretien also will speak at the second scientific session on Friday morning as well as before a meeting of the Section on Surgery that morning.

Arvin S. Glicksman, M. D.

Doctor Glicksman is Chairman of the Department of Radiation Oncology at the Rhode Island Hospital in Providence and Professor of Medical Sciences and Chairman of the Section on Radiation Medicine at Brown University. He has held both positions since 1973. A native of Brooklyn, New York, Doctor Glicksman was certified in therapeutic radiology by the American Board of Radiology in 1965.

He completed his undergraduate work at the University of California at Los Angeles and Queens College, receiving his M. D. degree in 1949 from the University of Chicago Medical School. He interned at Kings County Hospital in Brooklyn and served a residency in medicine at Memorial Hospital in New York City.

Doctor Glicksman did postdoctoral research and held fellowships at Duke University, Brookhaven National Laboratories in Upton, Long Island, New York; the Sloan-Kettering Institute in New York City, and the Royal Marsden Hospital and Institute for Cancer Research in London, England.

He currently is President of the New England Society of Radiation Oncologists, a member of the Executive Committee of the Cancer Control Board of Rhode Island and Chairman of the Board's Task Force on Information Systems and Evaluation; and a member of the Cancer Clinical Investigation Review Committee of the National Cancer Institute. Doctor Glicksman is the author or co-author of some 60 scientific articles.

Second General Scientific Session

The program for the second general scientific session on Friday morning will be devoted to subjects of interest in the fields of pediatrics, surgery and obstetrics and gynecology. Dr. Robert P. Pulliam of Beckley will serve as moderator.

Doctor Chretien will speak on "High Risk Pregnancy." The other two speakers will be Dr. Charles A. White, Jr., Professor and Chairman of the Department of Obstetrics and Gynecology at WVU, and Dr. Russell V. Lucas, Jr.

Russell V. Lucas, Jr., M. D.

Doctor Lucas, a member of the faculty at the WVU School of Medicine in 1961-66, currently is serving as Professor of Pediatrics at the University of Minnesota. He also is the Paul F. and Faith S. Dwan Professor of Pediatric Cardiology at the latter institution. A native of Des Moines, Iowa, he was certified in 1961 by the American Board of Pediatrics and by its Sub-Board of Pediatric Cardiology in 1964.

Doctor Lucas was graduated from Macalester College in St. Paul, Minnesota, and received his

Arvin S. Glicksman, M. D.

Russell V. Lucas, Jr.,M. D.

M. D. degree in 1954 from Washington University in St. Louis, Missouri. He served his internship and residency at the University of Minnesota. A Past President of the West Virginia Pediatric Society, Doctor Lucas is the author or co-author of almost 50 scientific articles and papers.

He is a member of the American Heart Association's Council on Circulation (Medical Advisory Board), its Council on Clinical Cardiology (Fellow), and its Council on Rheumatic Fever and Congenital Heart Disease. He also is a member of the Board of Directors of the Minnesota Heart Association and a member of the Heart Committee of the National Cystic Fibrosis Research Foundation.

Third General Scientific Session

The third and final general scientific session on Saturday morning will be a "Mini-Diabetic Seminar."

Dr. John W. Traubert, Chairman of the Department of Family Practice at WVU, will serve as moderator. Doctor Traubert, who is President of

the West Virginia Chapter of the American Academy of Family Physicians, will present a report at this session on "Family Practice in West Virginia—1975."

The three speakers on diabetes and their topics will be:

"Current Therapy for the Ambulatory Diabetic"—James M. Moss, M. D., Clinical Associate Professor of Medicine, Georgetown University School of Medicine, Washington, D. C.; "Mechanisms of Diabetic Stigmata"—Thomas G. Skillman, M. D., Professor of Medicine, Ohio State University College of Medicine, and "Management of Ketoacidosis"—Stanley R. Shane, M. D., Professor of Medicine, WVU.

Stanley R. Shane, M. D.

Doctor Shane is Chairman of the Division of Metabolism-Endocrinology in the Department of Medicine at WVU and is Assistant Project Director for the Area Health Education Center, Charleston. He was certified by the American Board of Internal Medicine in 1965 and in endocrinology in 1974.

A native of Kansas City, Missouri, Doctor Shane was graduated from the University of Kansas and

Stanley R. Shane, M. D.

John W. Traubert, M. D.

received his M. D. degree in 1958 from the University of Kansas School of Medicine.

Following an internship at the Los Angeles (California) County General Hospital, he served residencies in internal medicine at the University of Kansas and in internal medicine and as a Fellow in Endocrinology and Metabolism at WVU. He then served a two-year assignment as an internist-endocrinologist with the United States Air Force School of Aerospace Medicine in San Antonio, Texas. Doctor Shane is the author or co-author of some 24 scientific abstracts and papers.

Sections and Affiliated Societies

In keeping with the general program format initiated last year to keep the afternoons open for the enjoyment of the recreational facilities at The Greenbrier, most of the sections and affiliated societies of the Association will hold Friday breakfast meetings. Many of the guest speakers have accepted invitations to present talks at these meetings.

Dr. Hamper Kelikian of Chicago will speak on "Metatarsalgia and Allied Deformities" at the 8 A. M. Friday, August 22, breakfast meeting of the Section on Orthopedic Surgery in The Greenbrier's Jackson Room.

Meeting Friday afternoon will be the West Virginia Chapter of the American Academy of Pediatrics, the West Virginia Chapter of the American Society of Internal Medicine, and the West Virginia District Branch, American Psychiatric Association.

The West Virginia Association of Pathologists will hold a luncheon meeting on Saturday.

Room Reservations Pass 500 Mark

Reservations for the 108th Annual Meeting have passed the 500 mark as this issue of *The Journal* went to press. Physicians who plan to attend are urged to make reservations as soon as possible in order to be assured of accommodations at The Greenbrier.

The complete scientific program and other scheduled functions during the Annual Meeting will be published in the August issue of *The Journal.*

Allergy-Immunology Symposium Scheduled Next Month

A four-day symposium on "Allergy and Immunology for the Practicing Physician" will be held August 17-20 at The Greenbrier in White Sulphur Springs.

Topics will include "The Pharmacology of Bronchospasm," "Cholinergic Bronchospasm: Recognition, Diagnosis and Treatment," "Bronchoprovocation As A Diagnostic Tool," "Hay Fever and Asthma: What's the Connection?," "Status Asthmaticus;" and "Therapy of Chronic Contractable Recurring Asthma in Children."

The speakers will include Hymen Chai, M. D., Director of Hospital Services at Children's Asthma Research Institute and Hospital, Denver, Colorado; Richard R. Rosenthal, M. D., Instructor in Medicine at Johns Hopkins University School of Medicine, Baltimore; and Myron J. Zitt, M. D., Clinical Instructor of Medicine and Allergy at New York State University Medical School, Stoneybrook, New York.

The medical seminars will be held from 8 to 10 A. M. each day with rap sessions each evening at 6 P. M. A golf and tennis tournament will be held in conjunction with the meeting, beginning each day at 10 A. M.

For further information contact Dr. Claude A. Frazier, 4-C Doctors Park, Asheville, North Carolina 28801.

Association's WVU Liaison Committee Meets

The State Medical Association's West Virginia University Liaison Committee met on May 4 at the WVU Medical Center in Morgantown with Dr. Robert D. Hess of Bridgeport, Chairman, presiding.

Dr. Charles E. Andrews, Provost, Health Sciences, presented a detailed explanation of the WVU Medical Center budget. He stated that the medical center had been under-funded for the past four years and that there may have to be a severe cut in programs if there is not a sizeable increase granted by the State Legislature next year. He said the complicated process of legislative appropriations for the medical school causes some of the budget problems, adding that this complexity contributes to misunderstanding of the budget by the public, many members of the Legislature and newsmen. Low faculty salaries currently are the chief budget problem, he stated.

Dr. N. LeRoy Lapp, recently appointed Assistant Dean for Continuing Education, gave a report on this program. He informed the Committee that the American Medical Association had been requested to approve the continuing medical education program at WVU and that an AMA team probably would conduct a site visit before the end of the calendar year. He observed that there had been no State appropriated funds for continuing education this year and that the program would have to depend on registration fees in its beginning. Doctor Lapp said he was in the process of establishing an ad hoc advisory committee to the continuing education program at WVU which will be representative of the State medical community.

The committee was informed that Dr. John E. Jones, Dean of the WVU School of Medicine, has recommended that house officers and students at the medical school be contacted on a regular basis to determine if they desire to practice in West Virginia. This information will be passed on to the locations in which they indicate a desire to practice, but the medical school will not enter into actual negotiations.

Doctor David Z. Morgan, Associate Dean, gave a progress report on the selection of the first-year class to be enrolled this fall.

In addition to Doctor Hess, other members present at the meeting of the Association's long-standing committee were Drs. Kenneth J. Allen, Glen Dale; W. T. Booher, Jr., Wellsburg; K. Douglas Bowers, Jr., Morgantown; Terrell Coffield, New Martinsville; C. Richard Daniel, Beckley; Del Roy R. Davis, Kingwood; G. Thomas Evans, Fairmont; and A. J. Villani, Welch.

Some of the officers and guest speakers are shown above during the recent National Spring Meeting of the West Virginia Academy of Ophthalmology and Otolaryngology at The Greenbrier. From left, are Drs. John J. Shea, Jr., Memphis, Tennessee; Philip M. Sprinkle, Morgantown, a Director of the Academy; Robert W. Cantrell, San Diego, California; Walter E. Berman, Beverly Hills, California; Harry W. McCurdy and Vincent Hyams, both of Washington, D. C.; and William C. Morgan, Jr., Charleston, Director. Other officers for 1975-76 are Drs. Robert E. O'Connor, Charleston, President; Richard D. Richmond, Beckley, Vice President; J. Elliott Blaydes, Jr., Bluefield, Secretary-Treasurer; and Albert C. Esposito, Huntington, Director.

Association Scholarship To WVU Goes To Michael A. Kress

The State Medical Association has awarded one of its four 1975 scholarships to the West Virginia University School of Medicine to Michael A. Kress of Wheeling. Dr. Martha Jane Coyner of Harrisville, Chairman of the Association's Committee on Medical Scholarships, announced that Kress, who had been named first alternate by the committee, replaces Francis M. Cyran of Vienna. Cyran surrendered his scholarship for another scholarship from the U. S. Navy.

Michael A. Kress

Kress and the other three previously announced recipients have been accepted by the School of Medicine to begin studies next fall leading toward M. D. degrees. They will receive $1,000 for each of the four years while enrolled in the School of Medicine.

Kress received a B.S. degree in biology and an A.B. in English this spring from West Liberty State College. He is the son of Donald W. Kress, Sr., of Hazlet, New Jersey and the late Mrs. Kress.

The other 1975 recipients are Rosemarie Cannarella of Follansbee, Mary S. Boyd, Huntington; and Samuel D. Hensley, Jr., Dry Branch (Kanawha County).

Peripheral Vascular Disease PG Course To Be In Huntington

A one-day postgraduate course on "Diseases of the Peripheral Vascular System" will be held on Saturday, September 20, at the new downtown Holiday Inn on Third Avenue in Huntnington. The course is being sponsored by the Marshall University School of Medicine, the American Heart Association and Saint Mary's Hospital in Huntington. The program will begin with registration at 8 A. M. and conclude at 4:30 P. M.

Topics will include "Atherogenesis," "Clinical Evaluation of Peripheral Vascular Disease," "Non-Invasive Evaluation of Peripheral Vascular Disease," "Angiography of Peripheral Vascular Disease," "Vasopastic Disorders," and "Surgical Rx of Extracranial Cerebrovascular Disease."

Speakers announced to date will include Drs. Calvin E. Ernst, Associate Professor of Surgery, University of Kentucky; Clark H. Millikan, Professor of Neurology, Mayo Graduate School of Medicine, Rochester, Minnesota; William Gee, Head, Vascular Surgery Section, Department of Surgery, National Naval Medical Center, Bethesda, Maryland; and Edwin J. Wylie, Professor of Surgery, Parnassus Heights Medical Center, San Francisco.

The program is approved for six hours of Category 1 credit toward the Physician's Recognition Award of the American Medical Association—and for six hours of prescribed credit by the American Academy of Family Physicians.

For further information, contact the Office of the Dean, Marshall University School of Medicine, Third Avenue and Sixteenth Street, Huntington 25703.

AMA President, Dr. N. H. Dyer Honored At Weirton Event

Dr. Malcolm C. Todd, President of the American Medical Association, was guest speaker at the third annual Family Physician's Recognition Dinner held by the Department of Family Practice of Weirton General Hospital on May 14. Doctor Todd was

Malcolm C. Todd, M. D.

N. H. Dyer, M. D.

presented an honorary Associate Degree in Allied Health Studies by Dr. Daniel B. Crowder, President of West Virginia Northern Community College.

Some 300 guests attended the dinner honoring leaders and workers in the health care profession and allied fields.

Doctor Todd also was presented a recognition plaque for his contribution to health care on the national level. Presented plaques for their contributions on the State and local levels were Dr. N. H. Dyer, Director of the West Virginia Department of Health, and the Woman's Auxiliary to Weirton General Hospital. Mrs. Charles Saffle, President, accepted the plaque for the Auxiliary. Doctor Dyer, who was accompanied to Weirton by Mrs. Dyer, was honored for his long career in public health.

The official banquet welcome was made by Dr. George Naymick, a Hancock County Commissioner. Dr. Thomas J. Beynon was toastmaster and dinner chairman. Serving on his committee were Drs. Eli J. Weller, Chairman of the Department of Family Practice at Weirton General; Dr. Richard E. Flood of Weirton, a State Medical Association Delegate to the AMA; and Dr. Ray S. Greco of Weirton. Doctors Beynon and Flood were Doctor Todd's hosts for a tour of Weirton earlier on the day of the dinner.

Introduced by Doctor Flood, the AMA President addressed national health care issues and reviewed his recent trip to China. He said that skyrocketing costs for medical liability insurance are a pressing problem nationwide, although West Virginia physicians do not face premiums as high as those paid by physicians in most other states.

Modification of Legal Doctrine

Doctor Todd called for modification of the legal doctrine surrounding medical liability trial procedures and stated he believes the doctrine of informed consent should be modified or abolished and the collateral source rule (providing duplicate benefits to the patient) should be abolished. He noted that many problems arise from the large contingency fees of up to 40 per cent charged by attorneys in handling medical liability cases.

He suggested the issue could be resolved by establishing a joint underwriting association in each state, making remedial legislation in each state providing for equitable measure of damages and modification of the contingency fee system and, on a long range basis, establishment in each state of a medical accident liability commission comprised of attorneys, physicians and knowledgeable laymen who would adjudicate damages.

Noting that family physicians are the "key physicians" in the nation, Doctor Todd, a surgeon, outlined the growth of enrollment of freshmen at medical schools across the nation.

He does not see implementation of a national health insurance measure as a probability before 1977, although he said it could be an issue in the 1976 Presidential election.

The event was held in the Knights of Columbus Home in Weirton.

Joint Practice Commission To Hold Conference In November

"Collaboration between physicians and nurses in hospitals for Patient Care" is the subject of the Second National Conference on Joint Practice to be held November 2, 3 and 4 at the Drake Hotel in Chicago. The conference is sponsored by the National Joint Practice Commission.

Physicians and nurses working in hospitals, hospital administrators and others will discuss the effects on collaboration that result from using problem oriented records and from conducting joint patient care evaluation. They also will consider aspects of hospital organization and administration that encourage collaboration.

Dr. Richard E. Flood of Weirton is a NJPC Commissioner.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Aug. 8-10—Am. Academy of Clinical Toxicology, Kansas City, Mo.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 20—Diseases of the Peripheral Vascular System (PG Course), Huntington.

Sept. 21-24—Am. Assn. of Electromyography and Electrodiagnosis, Rochester, Minn.

Sept. 21-25—Am. Acad. of Ophth. & Otol., Dallas.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 24-28—Am. Acad. for Cerebral Palsy, New Orleans.

Sept. 25-26—Med. Society of D. C., Washington, D. C.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Sept. 30-Oct. 3—Am. Roentgen Ray Society, Atlanta.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 23-26—Med. Society of Virginia, Roanoke.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

1976

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 26-29—Am. College of Surgeons, Boston.

June 26-July 1—AMA Annual Meeting, Dallas.

WVU Medical Center
—News—

RECOGNITION of student and faculty achievement at West Virginia University School of Medicine was marked this past spring at an awards convocation at WVU Medical Center.

The awards given, and their recipients, are:

Lange Book Awards for scholastic achievement—Stephen P. Cassis of Charleston and Joseph M. Neal of Huntington, first-year students, and John F. Brick of Dunbar and Keith C. McLaughlin of Fairmont, second-year students.

Mosby Book Awards for scholastic achievement by five members of the second-year class—Richard A. Wallace of St. Albans, Kevan P. Andrews of Berkeley Springs, David J. Larkin of Princeton, Chris W. McGary of Charleston and Darrel K. Quick of Elkview.

Roche Award, an engraved watch and a scroll, to the member of the second-year class with the highest academic average—Scott K. Radow of Charleston. Radow also received the Anido Award, a textbook on clinical hematology, for outstanding achievement in laboratory medicine.

Upjohn Award, an engraved plaque and $150 check, for applied personal qualities, character and leadership decided by vote of the fourth-year class—John W. Treharne, Jr., fourth-year student from Philippi.

Lindsay Memorial Award, an ophthalmoscope-otoscope set, for outstanding performance in medical physiology—George E. Pritt, II, first-year student from Charleston.

E. J. Van Liere Award, an engraved medal and $100 check, for student research presentation judged by a faculty committee to be most excellent—Frank L. Schwartz, first-year student from Parkersburg; second place ($50)—Ellen Shaw, first-year student from Monongah; third place winners ($25 each)—Gary D. Marano of Clarksburg and Rocco Morabito of Huntington, third year students; fourth place winners ($15 each)—Paul F. Francke, first-year student from Charleston, Thomas S. Clark, fourth-year student from Bluefield, and George J. Linsenmeyer, second-year student from Huntington.

Edward G. Stuart Memorial Award, an inscribed desk clock and $25 check and recipient's name engraved on permanent wall plaque, for fourth-year student who "best exemplifies the qualities of empathy and understanding and strengthens competency with compassion" (selection made by committee of clinical department heads)—David L. Namay of Charleston.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

CIBA Award, a set of books, for second-year class member with outstanding community service—Richard D. Gais of Clark, New Jersey.

MacLachlan Award, engraved desk plaque and recipient's name entered on permanent engraved wall plaque, for "demonstrated unusual teaching ability and a sincere interest in the progress of the entire class" (selection of basic sciences faculty member or department by the second-year class)—Department of Pharmacology.

Outstanding Clinician Award, an engraved silver plate, for faculty member chosen by vote of the fourth-year class—Dr. Stanley R. Shane, Associate Professor of Medicine.

Zimmermann Prize Awarded

Barry Louden of Parkersburg, WVU School of Medicine student who graduated in May, won the annual prize given by the Bernard Zimmermann Surgical Society, Inc.

The prize of $100 and a certificate of recognition was awarded to Louden for his outstanding performance in the surgical clerkship during his third year. He is the son of Mr. and Mrs. Malcolm B. Louden of 2601 Elm Street, Parkersburg.

The organization honoring Doctor Zimmermann, Professor and former Chairman of the Department of Surgery at WVU, was founded in 1974 by an international group that includes several of his former chief residents.

Physician Visits Medical Center

Dr. Boyd K. Bresnahan, Acting Chairman of the Department of Psychiatry at Henry Ford Hospital in Detroit, recently spent two days visiting the inpatient service of the Department of Behavioral Medicine and Psychiatry at WVU.

Dr. David Withersty, Chief of the Inpatient Service, explained that Doctor Bresnahan plans to incorporate in his own department some of the teaching and training methods employed at WVU. Doctor Bresnahan had read about the program and its philosophy in the book, *The Group as Agent of Change*, edited by Dr. Alfred Jacobs and Dr. W. W. Spradlin. Doctor Spradlin is Chairman of the Department of Behavioral Medicine and Psychiatry at WVU.

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AIR FORCE. Health Care At Its Best.

The Month in Washington

• From the Washington Office of the American Medical Association.

THE American Medical Association has urged all members of the House of Representatives to oppose two key provisions of a health manpower bill that would extend federal control over medical education.

The controversial sections of the bill that won easy passage in the House Interstate and Foreign Commerce Committee would:

—Establish federal control of the number and location of medical residencies.

—Require all medical students to repay the federal government for U. S. aid to the school.

In a letter dispatched to the 435 lawmakers in the House, the AMA stressed continued support for federal assistance to medical schools and students. However, the Association said "strong objection is raised" to "certain new concepts" that would impose restrictions on students and on residencies.

The health manpower bill won approval by the House Commerce Committee with the two disputed provisions by roughly a 2-1 margin. The bill authorizes $1.7 billion for aid to medical, dental, nursing and other schools with a $2,100 per student capitation subsidy by the federal government for medical students.

A House vote is expected about mid-summer. The Senate has not yet considered the bill.

Repayments 'Discriminatory'

The AMA told House Members:

"These requirements—that the students, as a personal obligation, repay to the federal government those amounts which the government has given to the schools—are without precedent and are discriminatory against health professions' students. These conditions are not imposed on students in other fields, nor should they be. This amounts in effect to a forced loan required of all health professions' students under the bill. Once again, through the service requirements attached to the loan forgiveness features, the low income or disadvantaged student would carry a disproportionate burden. "The best way to attract individuals to shortage areas," according to the AMA, "is through mechanisms which allow the individual voluntarily to commit himself to service in a needy area. As to government programs, this could be done through such programs as the National Health Service Corps, scholarships for service in shortage areas, loan forgiveness, or other incentive programs.

"It should be done through a program where all students are under the burden of insuring that the federal assistance given to the school is repaid by the student," the AMA said.

The proposed control of medical residency training programs amounts to "the rationing of medical education . . . and poses many threats to our quality education system," according to the AMA.

The bill would establish two agencies: one would be responsible for accrediting medical residency training programs in the U. S.; the other to establish the number of positions which could be filled in each residency program.

The aggregate limit on the number of positions which could be available in the years 1978, 1979, and 1980, would be an amount equal to 155 per cent, 140 per cent and 125 per cent, respectively, of the estimated number of graduates from accredited U. S. schools of medicine in the year preceding.

CCME To Designate Positions

Priority for designation would be the Liaison Committee for Graduate Medical Education of the Coordinating Council on Medical Education (CCME) as the accrediting agency, and the CCME as the agency to establish the number of residency positions. The latter agency would determine the geographic distribution of residency training positions, the number of positions in each program, and an allocation of positions among the various specialties. In the absence of designation of the named agencies, the activities would be undertaken by another organization designated by the HEW Secretary.

Included with the AMA letter to the Congressmen was a copy of an article in the *Journal* of the Tennessee Medical Association by Tom Nesbitt, M. D., Speaker of the AMA House of Delegates and Chairman of the CCME. Doctor Nesbitt wrote that a question posed by the legislation is "of the private voluntary sector remaining voluntary, as opposed to its becoming an arm of the federal government, subject to its bureaucracy and its political influences and controls."

But the fight of the AMA and other medical organizations, including the Association of American Medical Colleges, to strike or limit the two controversial sections of the bill appears to be an uphill battle.

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Obituaries

EMMET D. MOYERS, M. D.

Dr. Emmet D. Moyers of Harrisville died on May 27. He was 89. A family physician, Doctor Moyers completed his undergraduate education at Glenville State College and Marshall University, receiving his M. D. degree in 1917 from the University of Maryland School of Medicine.

A veteran of World War I, Doctor Moyers was a former teacher and superintendent of schools in Ritchie County. He practiced in Cairo in 1919-38, in Harrisville, 1938-41, and was employed as company physician of the West Virginia Coal and Coke Company at Norton in 1941-52. From 1952 until his retirement in 1968 he was the company physician of the Elk River Coal and Coke Company at Widen. He was a member of the Tygart's Valley Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are one son, Dr. Emmet D. Moyers, Jr., of Los Altos, California; and a daughter, Mrs. Caroline Perrin of Bay Village, Ohio.

PG Course On Pediatric Radiology By Duke U. In November

A five-day postgraduate course on "Current Concepts in Pediatric Radiology" will be held November 3-7 at the Pinehurst Hotel in Pinehurst, North Carolina, by the faculty of the Departments of Radiology and Pediatrics, Duke University Medical Center, and a guest faculty.

The guest faculty will include Drs. David H. Baker and Walter E. Berdon of New York City, M. Paul Capp, Tucson, Arizona; J. Scott Dunbar, Vancouver, B. C., Canada; John A. Kirkpatrick, Boston; Edward B. Singleton, Houston; and Rick I. Suberman, Chapel Hill, North Carolina.

The Duke faculty will include Drs. Herman Grossman, Richard G. Lester, Robert McLelland and Michael Oliphant, Radiology; and Drs. Samuel L. Katz and Catherine Wilfert, Pediatrics.

There will be a daily systems-oriented format covering cardio-pulmonary, gastro-intestinal, genito-urinary and musculo-skeletal diseases, and a day for miscellaneous disorders. The program has been approved for 25 hours credit in Category 1 of the Physician's Recognition Award of the AMA.

For further information contact Dr. Robert McLelland, Radiology - Box 3808, Duke University Medical Center, Durham, North Carolina 27710.

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County Societies

MERCER

The Mercer County Medical Society met on May 19 at the Dinner Bell Restaurant in Princeton. Dr. William E. Gilmore of Parkersburg, President of the State Medical Association, was the guest speaker.

Dr. Gilmore discussed the malpractice insurance problems facing physicians today. He used slides to illustrate the services offered by the AMA, noting that medical education uses three-quarters of the AMA budget.—John J. Mahood, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on May 14 at Stevens Clinic Hospital in Welch. A film was shown on the problems of chest pain. The film was broken down into three parts: the patient who suffers chest pain as a result of myocardial infarction, the patient who suffers chest pain as the result of angina, and the patient who suffers chest pain from mixed origin. The various modalities of diagnoses of these conditions and their treatment were discussed. The very marked necessity for a good history for a differential diagnosis also was emphasized.—Arthur A. Carr, M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on May 6 at the Old Mill Club in Morgantown. The speaker was W. W. Heller, Ph. D., Executive Director, United States Pharmacopeial Council, Inc. He spoke on the Cooperative Project between the U. S. Pharmacopeia, XIX, and the United Mine Workers of America, and the involvement of the Pharmacopeial Council in the selection of the drug list for the UMWA Health and Retirement Fund.

Dr. George S. Arcanbault accompanied the speaker to the meeting and added several comments. Doctor Arcanbault is the Pharmacy Consultant to the UMWA Fund. Dr. John Newdorp, Executive Medical Officer of the UMWA Health and Retirement Fund, made several comments regarding the selection of drugs and how the UMWA became involved in this program.

Dr. Justus C. Pickett spoke regarding the formation of a five-county District Claims Review Panel by the Aetna Insurance Agency. The membership voted to support this program and requested the President to appoint three members to the panel.—H. Summers Harrison, M. D., Secretary.

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Woman's Auxiliary

to the

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Parliamentarian: Mrs. Rupert W. Powell, Fairmont

MONONGALIA

Editor's Note: Activities for 1974-75 recently were reported by the Woman's Auxiliary to the Monongalia Medical Society. Following is a summary of the program for the year:

September—Prospective members were special guests at the Annual Dues Coffee held at the home of Dr. and Mrs. Herbert E. Warden.

October—The Caduceanns, wives of students at the West Virginia University School of Medicine, were guests of honor at a dessert meeting at Mont Chateau Lodge near Morgantown. Mrs. David Z. Morgan, Auxiliary President, welcomed the guests and members. The speaker was Miss Bettye J. Broyles, archaeologist with the West Virginia Geological Survey, who presented a slide-lecture on "West Virginia Archaeology—Recent Finds."

November—Members of the West Virginia University Hospital Residents' and Interns' Wives Club were special guests at a covered dish dinner at the Pines Country Club. The Wild Turkey String Band, a folk music group, presented a musical program.

December—Mrs. Enid Portnoy and Mrs. Thora Golz presented a program of poetry and prose readings entitled "Holiday Delights" at a luncheon meeting held at the Holiday Inn. Mrs. Portnoy is an Assistant Professor of Speech Communication at WVU and Mrs. Golz, a former instructor in the English Department at WVU, is a substitute teacher in Monongalia County. Christmas gifts were collected to be taken to Weston State Hospital for Monongalia County residents who were patients there.

March—Doctor's Day was observed by members and their spouses with a dinner party at the Lakeview Country Club.

April—Members and their guests traveled by chartered bus to Pittsburgh where they participated in a guided tour of the new Sara Scaife Gallery and attended the flower show at Phipps Conservatory.

May—Mrs. William T. Lawson of Fairmont, President of the Woman's Auxiliary to the West Virginia

(Continued on Next Page)

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Prabhand Chinuntdet	Madison	Harold H. Howell	Madison	3rd Wed.
Brooke	R. L. Velarde	Follansbee	James E. Wise	Follansbee	
Cabell	Gerald E. Vanstan	Huntington	Colin M. Craythorne	Huntington	2nd Thurs.
Central West Virginia	I. Frank Hartman, II	Buckhannon	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fogle	Martinsburg	2nd Wed.
Fayette	Joe N. Jarrett	Oak Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pape	White Sul. Spgs.	T. O. Dotsan	White Sul. Spgs.	2nd Wed.
Hancock	Irwin M. Bogarad	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Mehmet V. Kalaycioglu	Shinnston	Julian D. Gasataya	Lumberport	1st Thurs.
Kanawha	George A. Shawkey	Charlestan	Richard C. Rashid	So. Charleston	2nd Tues.
Logan	Jorge J. San Pedro	Man	Enrica V. Rallos	Man	2nd Wed.
Marion	Robert G. Janes	Fairmont	Mary Jordan	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dolgovskij	Glen Dale	3rd Tues.
Mason	Antonio G. Sola	Pt. Pleasant	Young Choi	Pt. Pleasant	4th Tues.
McDowell	Romulo Miranda	Welch	A. A. Carr	Welch	2nd Wed.
Mercer	James P. Thomas	Bluefield	John J. Mahood	Bluefield	3rd Mon.
Mingo	Robert J. Tchau	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	Herbert E. Warden	Morgantown	H. Summers Harrisan	Morgantown	1st Tues.
Ohio	Alfred D. Ghaphery	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	Frederick D. Gillespie	Parkersburg	R. C. Cowan, Jr.	Parkersburg	1st Thurs.
Potomac Valley	Esteban Friera	Romney	Dewey F. Bensenhaver	Petersburg	2nd Wed.
Preston	Wm. H. Harriman, Jr.	Terra Alta	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Roy James Yates	Beckley	Wm. D. McLean	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hintan	E. L. Jimenez	Hintan	3rd Mon.
Tygart's Valley	Elvin G. Kreider	Philippi	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemoyne Caffield	New Martinsville	C. P. Watsan	New Martinsville	Manthly
Wyoming	Frank J. Zsaldas	Mullens	George F. Fordham	Mullens	Quarterly

WOMAN'S AUXILIARY (Continued from Page xvi)

State Medical Association, installed the officers for the coming year at a luncheon meeting held at Lakeview Country Club.

The new officers are Mrs. Thomas J. Tarnay, President; Mrs. Richard S. Kerr, President-Elect; Mrs. Thomas M. Howes, Vice President; Mrs. Joseph J. Renn, Jr., Recording Secretary; Mrs. Stanley J. Kandzari, Corresponding Secretary; and Mrs. Herbert E. Warden, Treasurer.—Mrs. W. Merle Warman, Press and Publicity Chairman.

64 Per Cent Of State Schools Without VD Education

Venereal diseases have a long history of being a serious social-medical problem in our State and nation. However, only during wartime periods has any concerted national effort been launched to control them by informing the public about their symptoms, effects, cure, and prevention, said Dr. N. H. Dyer, Director of the West Virginia State Department of Health, in a recent issue of *State of the State's Health.*

Current health statistics disclose that the venereal disease problem has again reached epidemic proportions and that the diseases are occurring among all economic, ethnic, and social classes. A particular area of concern is the growing incidence in the junior and senior high school age groups.

In March 1974, a U. S. Department of Health, Education, and Welfare sponsored survey was conducted to determine the scope and depth of venereal disease education in 15,930 public, parochial and private schools throughout the 50 states and the District of Columbia. From the 6,518 survey responses returned, it is estimated that approximately 42 per cent of our nation's 102,000 schools offer some type of venereal disease education to the students.

Unfortunately, West Virginia has no state-wide required health curriculum. Data collected for West Virginia reveal that 64 per cent of the schools are not providing any type of venereal disease education. Of the remaining 36 per cent of the schools where information is offered to students, approximately 70 per cent are utilizing some type of unit instruction. Nearly one-third are exposing students to only a pamphlet, a film or perhaps a visiting speaker.

Cases of venereal disease have become so numerous, that if evenly distributed by time, one victim would be identified every 12 seconds. If venereal diseases are to be controlled, parents, community leaders, educators, health personnel and young people must make more efforts for activating programs that will inform the public. Schools probably provide the best place to reach persons with knowledge about venereal diseases, but experience has shown that the responsibility belongs to no single agency, group or unit of society.

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With the injectable form, isolated instances of hypotension, tachycardia and blurred vision have been reported; also hypotension associated with spinal anesthesia, and pain following I.M. injection.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral: Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

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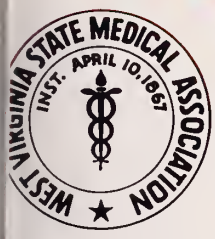

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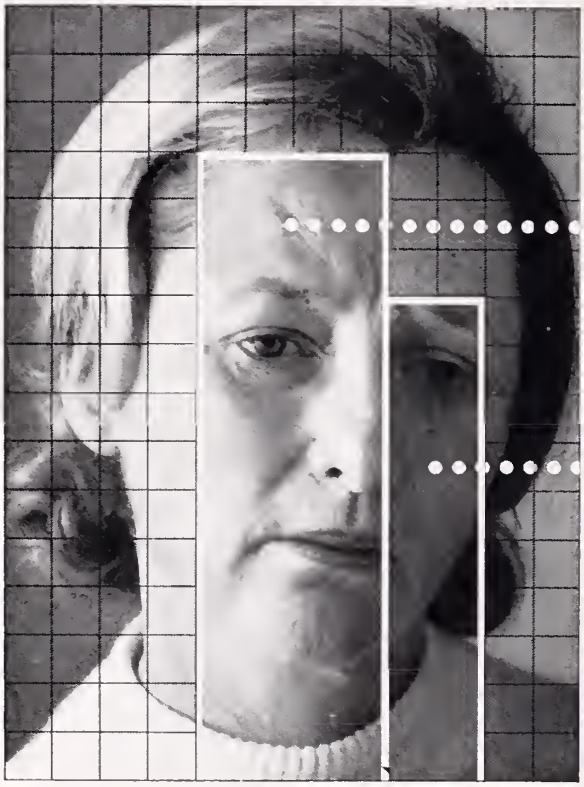

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Associated depressive symptoms

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in e and/or severity of grand mal se r require increased dosage of stat a convulsant medication; abrupt w may be associated with tempora crease in frequency and/or seve t seizures. Advise against simulta o gestion of alcohol and other CN e sants. Withdrawal symptoms (si those with barbiturates and alco occurred following abrupt disco (convulsions, tremor, abdomina cle cramps, vomiting and sweat g) addiction-prone indlviduals und c

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nt is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

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in psychoneurotic
anxiety states
with associated
depressive symptoms

e because of their predisposi-
ituation and dependence. In
, lactation or women of child-
e, weigh potential benefit
ssible hazard.

s: If combined with other psy-
or anticonvulsants, consider
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ugs such as phenothiazines,
barbiturates, MAO inhibitors
antidepressants may potentiate
Usual precautions indicated in
everely depressed, or with latent
n, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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AUGUST
1975

Vol. 71 No. 8

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

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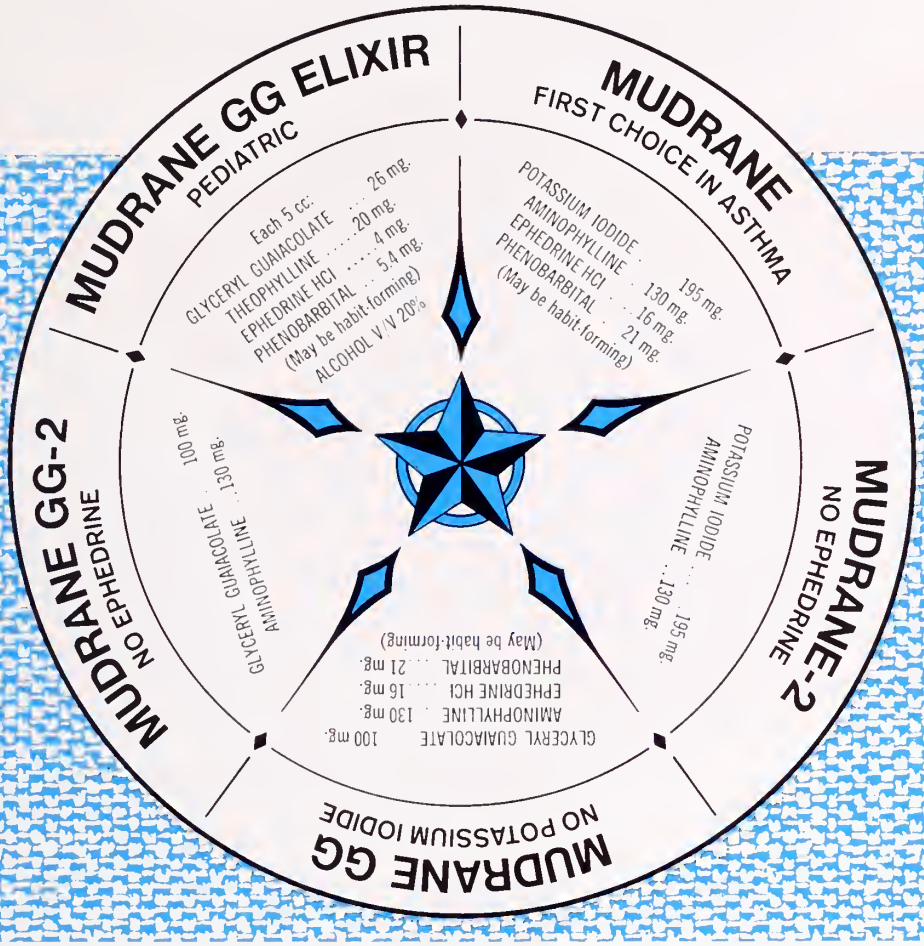
The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).



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CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

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ON THE FRONTIERS OF DIABETIC RESEARCH...

What is Diabetes?

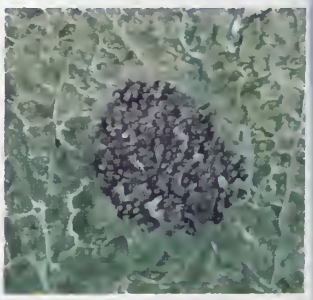
Although a medical scribe of ancient Egypt first made reference to diabetes mellitus in man, today, nearly 4000 years later, only meager specific knowledge exists as to the basic cause of the disease. Without such knowledge it has been possible to provide for limited control only *after* diabetes manifests itself in the form of elevated blood glucose. The possibility of prevention or even cure of diabetes, however, must depend on a full understanding of the genetic defect and/or defects underlying the disease. Our current understanding of diabetes may be compared to our former understanding of another disease of metabolic abnormality, phenylketonuria; only when the genetic lesion of that disease was discovered did it become possible to institute current programs of treatment.

Basic Diabetes Research at Upjohn

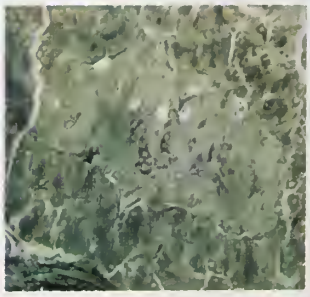
For more than ten years the Diabetes and Atherosclerosis Research Group at The Upjohn Company (W. E. Dulin, Director; G. C. Gerritsen; M. G. Soret; A. Y. Chang) has addressed itself, in a series of unique experiments, to the very basic question: What is diabetes? As with all such fundamental research, practical results are slow in coming and the work of the Group has at times raised more questions than it has been able to answer. It appears now, however, that the research is moving toward important conclusions which may, over the next several year have significant bearing on our unde standing of diabetes and, hopefully, d our ability to control it.

The Chinese Hamsters

In the middle fifties, a group study ing cytogenetics in Chinese hamsters a the Children's Hospital Medical Cente Boston, Massachusetts, discovered that certai hamsters develop diabetes spontaneously. Th Upjohn Research Group obtained some of these han sters in 1962, and by controlled inbreeding, succeeded ove the years in producing large numbers of diabetic animals fo study. To assure continuity of the research in the event of catastrophe, duplicate breeding stock of all the inbre families are maintained at another site. These are the onl such colonies in the United States today. In the course of th research, Upjohn has cooperated with scientists in academi



Normal Chinese hamster, pancreatic tissue. Note blue-stained insulin granules which appear within the beta cells of the islet of Langerhans.



Diabetic Chinese hamster, pancreatic tissue. Insulin granules are almost totally absent. Though beta cells are present, there is some degranulization and vacuolization. The diabetic process is similar to that observed in human pancreatic tissue.

enters, both in America and abroad, in various specialized tudies. When possible, these scientists have come to work for time in Upjohn laboratories. In other cases, specially se-ected hamsters were transported to outside research acilities.

Closer to Man

While other species besides man develop diabetes spontaneously, the Chinese hamster appears to be the best aboratory animal model to study, since its disease is re-narkably similar to diabetes in man. Chinese hamster dia-betes, like human diabetes, is a complex disease. Like humans, the hamsters have more than one variety of di-abetes, including the juvenile, insulin-dependent type as well as the maturity-onset type. They also develop patho-logical lesions in the retina, kidney, and peripheral nerves, as do human diabetics.

Diabetes is as complicated genetically in hamsters as it is in man. The type and severity of the disease appears to vary with the number of genes involved. Fortunately, genetic analysis can progress faster in the hamster since two or three generations can be produced per year.

Hamsters with Diabetic Genes Overeat

Perhaps one of the most significant observations is that hamsters with diabetic genes have significantly in-creased food consumption prior to development of clinical signs of diabetes. Further, if the animal with diabetic genes were limited to a normal amount of food, onset of diabetes could be delayed and reduced in severity, and the animal could have a normal life span of 34-35 months. Those animals that develop the clinical symptoms have a shorter life span, which varies with the severity of the disease. Inter-estingly, decreases in the incidence of human diabetes were noted during the siege of Paris in 1870, and during and immediately after World War II in Europe. It has been postulated that decreased food intake during these periods may have delayed the onset of the disease or reduced its severity to a point where hyperglycemia did not appear.

Peripheral diabetic neuro-pathy. Top photo, Chinese hamster; bottom photo, 58-year-old diabetic man. The encirclement of myelinated nerve fibers by thin Schwann cell processes, indicated by arrows, is a cellular reaction to chronic demyelination, and is a characteristic finding in this condition in both man and the Chinese hamster.

Implications for the Future

The purpose of the Upjohn Research Group is to attempt, through its work with the Chinese hamsters, to find the basic genetic lesion or lesions associated with diabetes. Such knowledge could provide the information necessary to predict the disease in humans, to define its exact mode of inheritance, and to initiate studies aimed at correcting the defect or defects. Hopefully, it will eventually be possible to devise methods to prevent the development of the abnor-malities associated with the disease, if the defect or defects can be corrected. Such methods may replace all treatment in use today.

Already, a beginning has been made in the establish-ment of programs to apply the information gained from the hamster research. The Upjohn Group is currently working with pediatric endocrinologists in an attempt to define the genetics of human diabetes and to confirm retrospectively whether the discoveries concerning dietary manipulation in genetically diabetic hamsters can be applied to humans. Should the results of these investigations be positive, and if it becomes possible through further work with the hamsters to identify prediabetic humans before they develop signs of the disease, an enormous stride will have been made. Even though the investment in this research is made with no guarantee, this risk must be undertaken.

Note: For bibliography of published papers, please write to W. E. Dulin, PhD, Upjohn Diabetes and Atherosclerosis Research Group, 7241-25-9, Kalamazoo, Michigan 49001.

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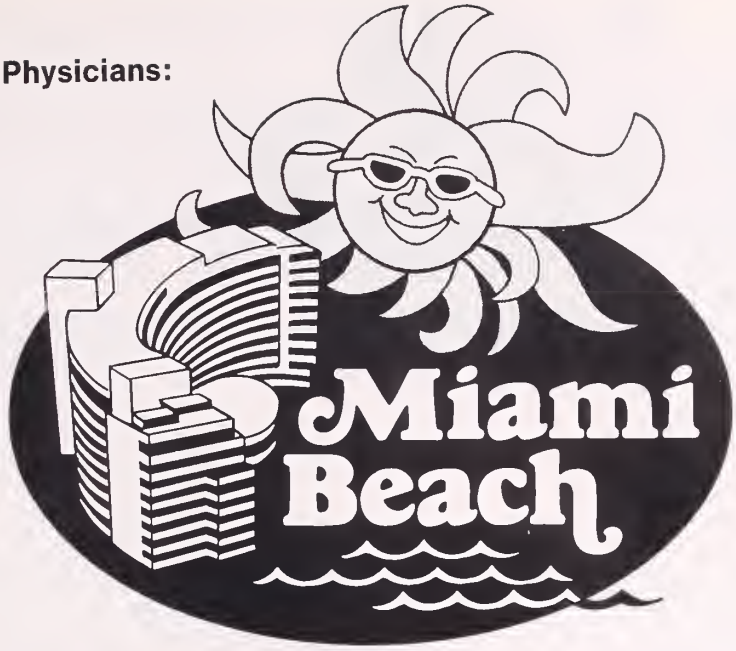

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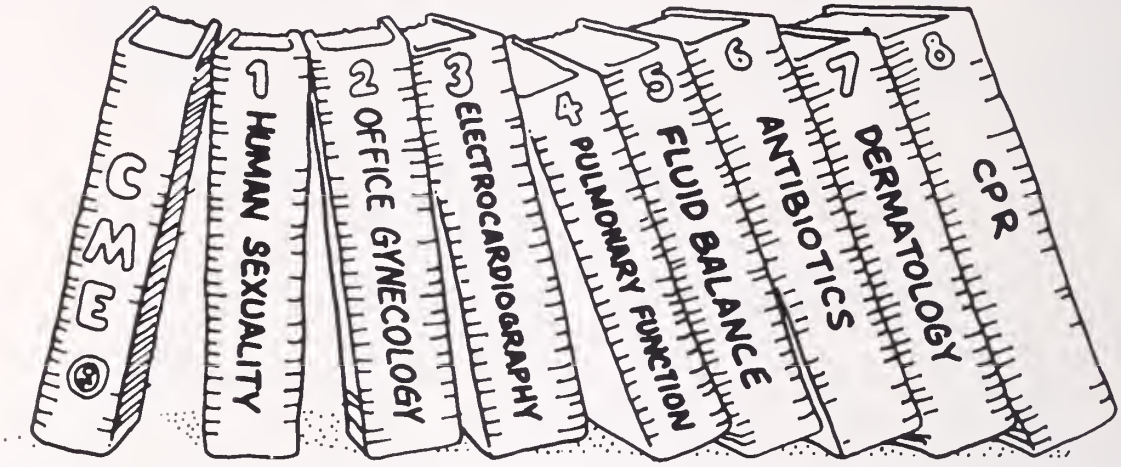

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The West Virginia Medical Journal

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Use of Intraocular Lenses In Cataract Surgery

M. C. Korstanje, M. D.

The purpose of this paper is to acquaint the reader with an important new mode of treatment of surgical aphakia: the use of compensating intraocular lenses, or *pseudophakoi*, to replace the crystalline lens. In June, 1974, I was privileged to visit the clinic of Dr. C. D. Binkhorst of Terneuzen, the Netherlands, and to witness the use of these fascinating prosthetic devices which are installed within the eye at the time of surgical removal of cataract. Doctor Binkhorst, while not the originator of this technique, is certainly the modern authority on its use, and is responsible for having rescued the intraocular lens concept from oblivion. Such oblivion had occurred because of the early disastrous results with the intra cameral lenses in the 1950's.

The modern Binkhorst lens, however, is technically a much more refined product than the earlier so-called anterior chamber lenses, being a plano-convex methacrylate lens measuring only 5mm. in diameter and having a volume of about 8mm.[3] When one considers that the anterior chamber volume is about 125mm.,[3] one can appreciate its diminutive size. More important in assuring its present success, however, are the modern physiologic concepts governing its usage. The early Ridley and Strampelli lenses were anterior chamber lenses in which the weight of the lens was borne by the delicate endothelium of the anterior chamber angle. The currently popular Binkhorst II lens is a posterior chamber lens, the lens weight being supported by the posterior and equatorial portion of the lens capsule. Intermediate between the early chamber lens and the modern iridocapsular lens is the iris supported lens, known variously as the iris plane lens, iris clip lens, and the medallion lens.

The pseudophakos most commonly used has a dioptic power of +19.50 diopters. While in place in the ocular media, its refracting ability is determined by its anterior radius and by virtue of the difference in the indices of refraction between aqueous humor and polymethylmethacrylate. This power is usable for most individuals from age 10 to 50 plus. The age group of one to 10 requires a slightly stronger power. The surgeon might choose a lesser or greater powered lens if the history suggests a significant myopia or hyperopia which was present prior to cataract development.

The Author

- **M. C. Korstanje, M. D., 1508 Sixth Avenue, Huntington, West Virginia.**

From the standpoint of a theoretic ideal, one can easily appreciate the optical advantages of an intraocular prosthesis. The *pseudophakos* most nearly approaches the physiologic ideal of the natural lens by virtue of its intraocular position, and it therefore gains more natural optical properties. Avoided are the disadvantages of cataract spectacles such as magnification of image size, limitation of visual field, and inequality of image size in monocular aphakia. This latter factor, inequality of image size or aniseikonia, virtually precludes the use of spectacles where the aphakic eye retains good vision. In such cases, one is obliged to use a contact lens, often quite successfully, but nonetheless in many cases not so, especially in debilitated elderly aphakics and in children. The pseudophakos eliminates the handling problems inherent in contact lenses.

Surgical Technique

The surgical technique in the modern Binkhorst procedure consists of a planned extracapsular lens extraction, one or two peripheral iridectomies, and the insertion of the lens with the platinum-iridium wire loops resting in the posterior chamber against the posterior capsule

and the methyl methacrylate optic lying immediately anterior to the iris in a pre-pupillary position. The extracapsular technique, properly carried out, results in removal of the lens cortex *en masse* and virtually *in toto*, resulting in a surprisingly clear posterior capsule remaining *in situ*. The vitreous body remains undisturbed, thus conceivably adding an advantage as regards retinal complications. Binkhorst admits that about 30 per cent of patients require a needling of the posterior capsule as a later secondary procedure. This can be done without dislodging the pseudophakos.

The capsular support technique has minimized many of the complications associated with iris support lenses which include excessive lens movement (pseudophako-dinesis), pupillary displacement of the lens, and endothelial trauma of the cornea due to repeated touching by the front surface of the lens. Problems that remain include iris synechia formation, iris atrophy, and poor optical clarity due to persistent opaque posterior capsule. The long-term prognosis for wearers of these lenses remains undefined, but Binkhorst has some patients wearing his iris fixed lens and his iridocapsular lenses for as long as 10 years. He had implanted 1,250 lenses of various design at the time of my visit in June, 1974, 1,150 of which were of the iris support or the capsular support type. As of January 1, 1972, the total number of lens implantations of both iris clip and iridocapsular design done in the Netherlands numbered 2,724. Among these, the removal of only one eye has been reported, and this was due to purulent endophthalmitis following trauma.

Case Reports

Case 1: J. D. S. 21169

A seven-year-old boy sustained a perforating wound of the left cornea on May 16, 1974. Examination of May 17, 1974, showed a perforating wound of the upper nasal quadrant of the cornea with the iris plugging the wound and with an incomplete cataract. Visual acuity and light perception were recorded. Repositing of iris, reformation of anterior chamber with air, and suture repair of cornea were carried out under a general anesthesia. Ninety-five days later the patient underwent an extracapsular lens extraction consisting of removal of the anterior capsule and aspiration of a mature cararact. A Binkhorst II irido-capsular lens was placed and examination 21 days post-operative showed a well-placed pseudophakos with uncorrected left visual acuity of 20/50-2 (Figure 1). On January 4, 1975, 137 days post-operative, the left uncorrected visual acuity was 20/30-2, correctable with +075 sphere to 20/25. Ocular media was not completely optically clear due to pigmented precipitates on the posterior surface of pseudophakos, and a moderate posterior capsular membrane. Normal disc and macula were visualized.

Case 2: D. A. M. 6792

A five-year-old boy sustained multiple perforating wounds of the left cornea with a traumatic cataract due to shrapnel from a dynamite cap on November 26, 1965. An extracapsular lens extraction and sector iridectomy were performed on December 2, 1965. Contact lens corrected visual acuity of the left eye was achieved on August 15, 1966 of 20/40. The patient subsequently failed to wear the contact lens and when seen on August 17, 1974, presented a deep disuse amblyopia of the left eye. Binkhorst II pseudophakos was positioned on September 5, 1974, and an iridopexy was performed to convert the V coloboma into a round pupil. The iridopexy spontaneously disrupted on the fifth post-operative day and the lens subluxated into the anterior chamber on the fifteenth post-operative day. Removal of the lens became necessary at that time.

Case 3: J. F. E. W. 18524

A sixty-nine-year-old retired mail carrier presented with a right mature cataract and right visual acuity of count fingers at three feet, and, also, a left incipient cataract with 20/25-2 left visual acuity. He underwent a planned extracapsular lens extraction, two peripheral iridectomies and placement of Binkhorst II lens in the right eye on November 11, 1974. Right uncorrected visual acuity on December 10, 1974, was 20/60-1 which was corrected with a 1.00 diopter cylinder to 20/50-2. Visual acuity on January 5, 1975, 54 days post-operative, was noted as uncorrected at 20/200; however, it was corrected with −1.50 diopter cylinder to 20/40. The patient volunteered a history of slight amblyopia in the right eye since childhood which was substantiated by evidence of a slight rotary nystagmus of the right eye on slit lamp examination.

Case 4: D. H. L. 1263

A forty-eight-year-old factory employee sustained a left perforating corneal injury and traumatic cataract due to tine from a wire brush on May 7, 1963. An extracapsular lens extraction and iridectomy on the left eye were performed on May 21, 1963 followed by discission of the posterior capsular membrane on July 17, 1963. Subsequently, a contact lens achieved a corrected acuity of 20/30. Wearing of the contact lens was stopped in 1968 due to discomfort. On

November 14, 1974, the patient underwent placement of a Binkhorst I (iris clip) lens and iridopexy to convert the V coloboma to a round pupil. Post-operatively, uncorrected visual acuity was recorded as follows (Figure 2):

day two: 20/100
day eight: 20/40
day thirty-two: 20/20 (with 0.50 diopter astigmatic over correction)

The patient remained comfortable throughout the post-operative recovery period.

Case 5: E. C. 16100

A fifty-seven-year-old female, a registered nurse, presented with a left immature cataract and with a right soflens contact lens corrected aphakia on December 3, 1974. On December 18, 1974, she underwent a left planned extracapsular lens extraction, two peripheral iridectomies and placement of Binkhorst II pseudophakos. Left visual acuity post-operatively was as follows:

day three: 20/80
day nine: 20/60-1 (correctable with small astigmatic prescription to 20/40-3)
day seventeen: 20/40-2 (matching acuity of contact lens corrected right eye)

Summary

This case series, although small, covers a fairly diverse range of traumatic cataract and senile cataract cases. Case 1 (Figure 1) illustrates how a pseudophakos can be utilized in a traumatic cataract of recent origin. Figure 1 shows an iridocapsular lens (Binkhorst II) in place. A traumatic ididotomy due to original perforating injury can be seen at 11 o'clock iris. A portion of the platinum-iridium loop can be visualized through the surgical iridectomy. Although the patient had not been tested for degree of binocular vision at the time of the last office visit, there is no reason to believe he does not have a fairly normal binocularity. Optimal acuity was hampered on the posterior lens face, a phenomenon which did not occur in any of the subsequent cases. Case 2, a failure, illustrates the difficulty of converting a V coloboma to a round pupil when the iris is shrunken. An iris clip lens could have better been employed in this case. Cases 3 and 5 represent senile cataract cases in which an optimal extracapsular extraction was achieved, lens tolerance was wholly satisfactory, and good visual acuity was achieved early and improved further during the first six weeks. Case 4 illustrates how the pseudophakos can rehabilitate binocular vision in a case of previous contact lens failure. Case 1 illustrates how the tribulations of contact lens wear in the under-10 age group can be avoided. (A study in England indicates that of 308 monocular aphakics, only 20 were wearing their contact lens after 10 years).[2]

Figure 1.

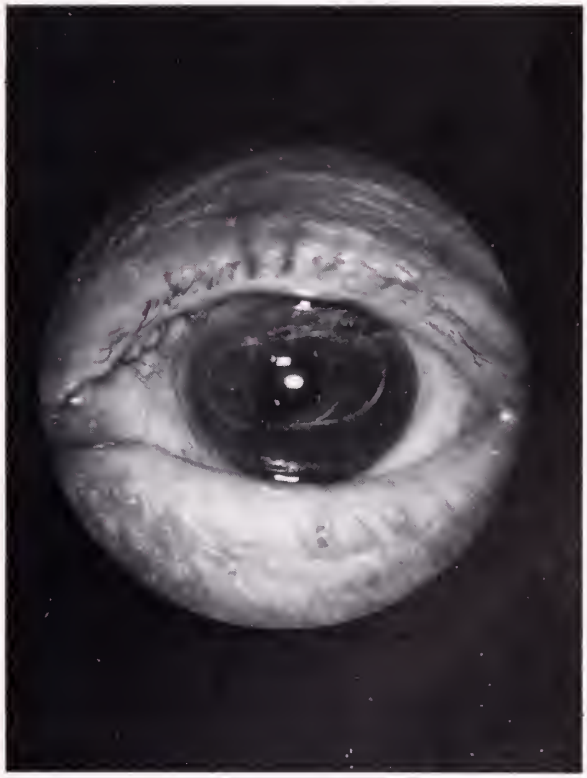

Figure 2.

Conclusion

The intraocular lens has had remarkably little utilization in this country.[2] This is in no small measure due to the deservedly bad reputation earned by the earlier intra cameral lenses of 20 years ago. At that time, strong voices of surgical conservatism arose to generally condemn intraocular lenses. Such opposition, however, should not be allowed to stymie fresh approaches to therapeutic problems. The modern pseudophakos, perhaps best exemplified by the Binkhorst iridocapsular lens, has been extensively employed by capable and judicious clinicians such as Binkhorst, Worst, and others, whose primary concerns are patient oriented. Their large experience, a portion of which I viewed at firsthand, coupled with my personal clinical experience, lead me to recommend their consideration as a modality of treatment in cataract surgery.

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Metastatic Tumors To The Kidney

Wade B. Stoughton, M. D.; and D. Franklin Milam, M. D.

METASTATIC tumor to the kidney is infrequent, despite the fact that 20 per cent of cardiac output is delivered to the kidneys. Malignant cells may also spread to the kidneys directly from adjacent organs such as the adrenal or colon, or by the lymphatics, but they usually do so via the blood stream. The spread of solid tumor to the kidneys is usually not manifest clinically. This increases the difficulty of preoperative diagnosis. During the eight months preceding the writing of this paper two cases of metastatic carcinoma to the kidneys from unusual primary sites were seen at the West Virginia University Medical Center.

The Authors

- **Wade B. Stoughton, M. D., Resident, and D. Franklin Milam, M. D., Department of Surgery, Division of Urology, West Virginia University Medical Center, Morgantown.**

Case 1

R. H. (H23-30-56), a 62-year-old white female, was admitted to the Surgical Service with a one-month history of severe low back pain. Pertinent past medical history revealed that she had received radiation therapy for Stage 1 squamous cell carcinoma of the cervix in 1953. Physical examination including gynecologic exam was unremarkable. Metastatic workup including barium enema, bone and liver scans, Pap smear, complete blood count, 6 and 12 channel autoanalysis and urinalysis were within normal limits. Intravenous pyelogram showed non-function of the left renal unit (Figure 1). A retrograde pyelogram showed obstruction of the left distal ureter (Figure 2). She underwent a left nephrectomy and had an uneventful postoperative course. The pathology report was returned as showing metastatic squamous cell carcinoma to the left kidney.

Figure 1. Intravenous pyelogram showed non-function of the left kidney.

Figure 2. Intravenous pyelogram done preoperatively, with mild calicectasis on the left.

Case 2

D. S. (H22-80-96), a 66-year-old white male, was admitted to the ENT Service for evaluation of hemoptysis. Three years prior to admission, he had undergone laryngectomy and radical neck dissection, receiving 3,800 rads preoperatively. Postoperative follow-up had failed to show any evidence of recurrent or metastatic disease. Two months prior to admission, the patient had undergone transurethral prostatectomy and vesical litholapaxy. Preoperative intravenous pyelogram showed mild calicectasis on the left (Figure 2).

Physical examination other than the obvious laryngectomy status was unremarkable. Laboratory data showed blood urea nitrogen of 30 mg. and creatinine of 1.7 mg. per 100 ml. Urinalysis was normal. Bronchoscopy showed only bronchitis. An intravenous pyelogram showed a prolonged nephrogram of the left kidney (Figure 3). Retrograde pyelography subsequently localized the area of obstruction at the left ureteropelvic junction (Figure 4).

A left renal exploration was performed through the flank. The kidney was adherent to the surrounding perinephric structures by a dense fibrous reaction. Whitish nodules measuring from 0.6 to 2 cm. were present on the renal capsule, preinephric fat and psoas muscle. Biopsy of these nodules demonstrated metastatic squamous cell carcinoma. Nephrectomy was not performed. The patient expired on the twelfth postoperative day in oliguric renal failure. Permission for a postmortem examination was denied.

Discussion

Willis[1] reported an 8 per cent incidence of metastatic carcinoma to the kidney in 500 consecutive postmortem exams of patients who died with carcinoma. Klinger[2] reported on 5,000 autopsies at Henry Ford Hospital; 118 were found to have renal involvement with metastatic cancer. Abrams[3] found the kidney to be involved in 12.6 per cent of 1,000 autopsy cases of various types of carcinoma (Table 1). In Klinger's series, bilateral renal involvement was seen in 85 of 118 patients whereas only 33 were found to have unilateral disease.

TABLE 1

Author	*Year*	*No. of Patients*	*Renal Involvement*	*%*
Klinger	1951	5000	118	3%
Willis	1952	500	40	8%
Abrams	1950	1000	126	12.6%

Figure 3. Follow-up intravenous pyelography showing prolonged nephrogram on the left.

Figure 4. Retrograde pyelography localized the area of obstruction at the left uretero-pelvic junction.

The most common metastatic renal lesion is lymphoma. Carcinoma of the lung, bronchus or pleura, however, represent the most common solid tumor to metastasize to the kidneys.[4,5] Stomach and breast are the next most common primary sites. Roy recently reported one case of metastatic cervical carcinoma to the kidney.[6] Klinger found only two cases of cervical carcinoma in his review (Table 2).

TABLE 2

Number of Cases Metastatic to One or Both Kidneys

Lymphoma	45
Breast	9
Stomach	11
Lung	17
Pancreas	7
Tongue	2
Gallbladder	4
Esophagus	4
Thyroid	1
Cervix	2
Bladder	1
Melanoma	1
Granuloma	1
Osteosarcoma	1
Fibrosarcoma	1
Ovary	3
Ileum	1
Rectosigmoid	2
Testis	1

Metastatic laryngeal carcinoma of the kidneys is quite rare.[7] Braund and Martin[8] autopsied 284 patients who died of upper respiratory and upper alimentary tract malignancies. This series included 55 cases of laryngeal carcinoma, none of which showed metastatic spread to the kidneys. Pietrantoni and Fior[9] autopsied 570 patients who died of laryngeal carcinoma and no renal metastases were found.

Metastatic disease to the kidney is usually not characterized by clinical signs or symptoms. Renal insufficiency and azotemia are not important features unless parenchymal destruction is severe or combines with ureteral obstruction. As a rule, metastatic carcinoma to the kidneys is not usually suspected clinically. Although the first patient did present with low back pain, her pain was not relieved postoperatively by nephrectomy. Renal function studies and urinalysis were also normal. The second patient was found to have renal disease only as an incidental finding of calicectasis which was noted on the routine intravenous pyelogram for benign prostatic hyperplasia workup. Postoperatively, his blood urea nitrogen continued to rise as he became progressively oliguric. The renal failure had the appearance of being secondary to acute tubular necrosis possibly related to hypotensive insult. Klinger found only six cases of uremia secondary to neoplastic involvement;[2] of these, four cases were lymphoma, and the other two cases, one stomach and one bladder, were probably caused by ureteral involvement.

Summary

Secondary tumors of the kidney are extremely uncommon clinically. Two cases of metastatic squamous cell carcinoma to the kidney are presented with a review of the literature.

A list of references may be obtained by writing The Journal.

Problems are the price of progress: don't bring me anything but trouble – good news weakens me.

Charles F. Kettering

Systolic Hypertension
(A Case Report)

Orlando I. Agnir, M. D.

MANY well-respected clinicians contend that the practicing internist of today needs more than an electrocardiogram to evaluate his cardiac patient. Perhaps the clinicians of yesteryear were accurate in the exclusive use of their senses (their ears and finger tips) to determine the exact timing of murmurs and/or to detect the absence or presence of an anacrotic or dicrotic notch in the carotid pulse, etc. Be that as it may, I would like to present to the reader the following case history of significant interest.

The patient, a 22-year-old white male, was examined in the emergency room of Kings Daughters Hospital in Martinsburg, West Virginia on February 5, 1974 because of epistaxis. In addition, his blood pressure on the right arm was 200/70 mm./Hg. and on the left arm, 190/70 mm./Hg. He had been followed-up by his family physician since childhood. Librium had been prescribed for hypertension during the past several months on the presumption that he suffered only mild, labile hypertension. The patient, however, presented a history of epistaxis since childhood with recurrences in junior and senior high school, and in college. Occasional headaches were noted, too. He denied cardiovascular symptoms, however, such as chest pain or effort intolerance. To substantiate his denial, he listed his participation in physical activities such as basketball and track.

The patient was admitted for observation on February 5, 1974, and remained until February 7, 1974. The most pertinent physical findings were related to the cardiovascular system. At rest, his blood pressure stabilized at approximately 170/56 mm./Hg. Peripheral signs of aortic insufficiency were discovered including a "water-hammer" pulse, "pistol-shot," and even a "Quincke's" pulse; in addition, both femoral pulses were palpable but delayed. The heart was determined to be enlarged with the apex beat in the fifth intercostal space, but three cm. lateral to the mid-clavicular line. A sustained left ventricular thrust indicated left ventricular hypertrophy. A systolic thrill was felt in the aortic valve area but there was no diastolic thrill. In the 2 RIS and 3 LIS an early diastolic murmur that was soft and blowing could be heard. With the patient in the lateral decubitus position, a diastolic rumble without a preceding opening snap was discernable, and this was interpreted as being consistent with an Austin-Flint murmur.

The Author

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A diagnosis of aortic insufficiency probably due to rheumatic heart disease was made. A phonocardiography and cardiac x-ray series were done to confirm the clinical impression. The phonocardiogram (Figure 1) illustrates a typical, early diastolic murmur that is decrescendo and occupies almost all of the diastole, consistent with aortic insufficiency. A modest, diamond-shaped systolic murmur of functional aortic stenosis is also apparent. The carotid pulse tracing shows almost complete absence of the dicrotic notch; and, in addition, there is a delay in the upstroke.

The cardiac x-ray series demonstrated left ventricular hypertrophy, a double shadow of possible left atrial enlargement, and posterior displacement of the barium-filled esophagus. A disturbing feature, however, was the presence of an "E" sign in the right anterior oblique projection with a poorly defined aortic knob.

In addition to the phonocardiogram findings, the left ventricular ejection time measures out to 320 msec. even if the LVET is measured from the beginning of the upstroke of the carotid pulse to the second heart sound. This would not allow for a normal carotid pulse delay in relation to events in the left heart. This finding, plus the delay of the upstroke of the carotid pulse, is strongly suggestive of a resistance to left heart outflow. In the absence of aortic stenosis coexisting with wide-open aortic insufficiency, something else had to be causing this resistance to left heart outflow. Certain congenital anomalies were given consideration, but the differential diagnosis of systolic hypertension was reached after reflecting upon the following: thyrotoxi-

cosis, severe anemia, peripheral arteriovenous fistula, patent ductus arteriosus, aortopulmonary fenestration, truncus or hemitruncus arteriosus, ruptured sinus of Valsalva, coronary arteriovenous fistula, ventricular septal defect with aortic regurgitation, aortico-left ventricular tunnel, fenestration of aortic valve leaflets, bicuspid aortic valve (probably with, but possibly even without, coarctation of the aorta), Paget's disease of the bones, generalized arteriosclerosis, aortic incompetence, and beriberi heart disease.

Diagnosis and Treatment

The most logical diagnosis was aortic insufficiency co-existing with coarctation of the aorta. The patient subsequently was referred to a nearby medical center where the coarctation of the aorta was corrected. Ten days later, a second thoractomy for placement of an aortic valve Kaster prosthesis was performed. At this time, the patient is doing well, has returned to his work as an accountant and plays 18 holes of golf weekly.

Figure 1. Phonocardiogram (PCG) at the aortic valve area (AVA) at 250 cycles per second (cps.) showing simultaneous reference electrocardiogram (EKG) and carotid pulse tracing (CPT) taken with a Hewlett Packard 3-channel ECG/Phono system, Model 1514B. The PCG shows a typical early diastolic murmur that begins with the onset of the second heart sound, labeled DM. It is decrescendo and occupies almost all of the diastole. There is a midsystolic murmur, labeled SM, which is diamond-shaped, consistent with functional aortic stenosis. The CPT is abnormal because the upstroke is delayed and the dicrotic notch is missing. The left ventricular ejection time (LVET) is measured in this instance from the beginning of the upstroke of the CPT to the beginning of the second heart sound because the dicrotic notch cannot be placed accurately. Even so, the LVET at 320 msec. is prolonged for a heart rate of 63 per minute.

The Diagnosis And Treatment Of Acute Ankle Sprains

Robert T. VanUden, M. D.

Ankle sprains are one of the most common injuries, seen by many, if not all, physicians.[1,4] The term "sprain" is commonly used to define all ligamentous injuries in the vicinity of a joint in which no radiological evidence of a fracture can be found. It should be recognized that the terms, "sprain," "subluxation," and "dislocation" are all members of a continuum, differing only in severity, and that the differentiation cannot usually be made by x-ray. Seventy-five per cent of acute sprains are associated with complete rupture of at least one ligament,[2,3] and the numerous reports concerning functional instability, pain, and forced limitation of activity are testimony to the fact that many serious lesions are not diagnosed and treated by primary care physicians. Even in the presence of a complete ligamentous rupture, clinical instability cannot usually be demonstrated and stress x-rays are often negative due to pain and splinting of the extremity.

The purpose of this review is to acquaint the clinician with the site and degree of damage seen in common sprains, and to discuss the treatment and prognosis of such sprains.

The Author

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Inversion (Adduction, Plantar Flexion) Sprains

Inversion sprains are considered to be the most frequent and are the injuries most often associated with long-term complaints of functional instability and pain.[1,2,5,7,10,12] The lateral collateral ligament consists of the anterior talofibular ligament, the calcaneofibular ligament, and the posterior talofibular ligament (Figure 1). Sixty-five per cent of inversion sprains have complete rupture of the anterior talofibular ligament and anterior ankle joint capsule, and 20

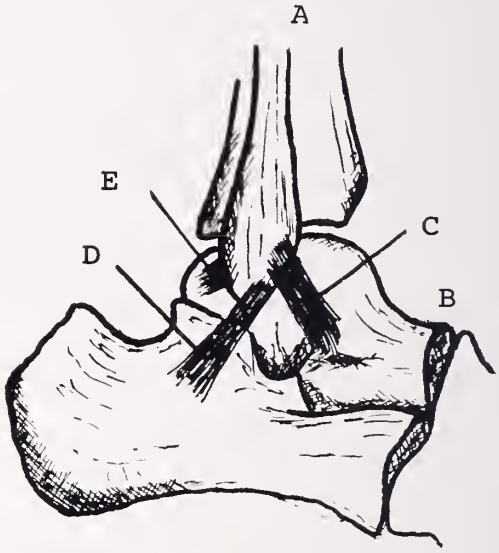

Figure 1. Diagrammatic lateral view of the ankle: A, fibula; B, talus; C, anterior talofibular ligament; D, calcaneofibular ligament; and E, posterior talofibular ligament.

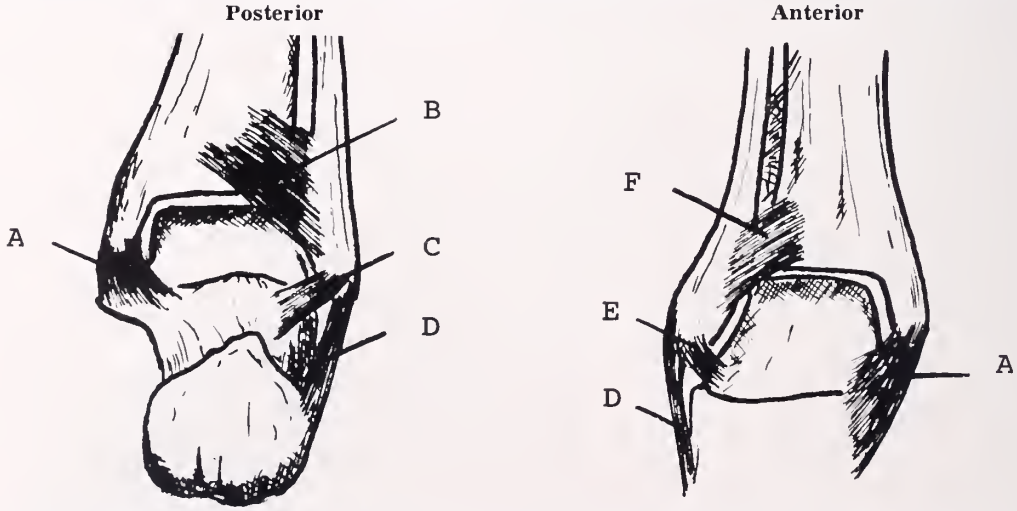

Figure 2. Diagrammatic anterior and posterior view of the ankle: A, deltoid ligament; B, posterior tibiofibular ligament; C, posterior talofibular ligament; D, calcaneofibular ligament; E, anterior talofibular ligament; and F, anterior tibiofibular ligament.

per cent have combined rupture of anterior talofibular and calcaneofibular ligaments.[2,3,9,12] Tenderness and swelling can be localized anterior and inferior to the lateral malleolus.

External Rotation Sprains

Experimentally, pure external rotation of the foot on the leg ruptures the anterior tibiofibular ligament, with the posterior tibiofibular ligament and interosseous membrane usually remaining intact (Figure 2). This injury constitutes ten per cent of all sprains and the location of pain and swelling in front of and superior to the talofibular ligament usually provides a clue for the diagnosis.[1,2,9,11] Historically, most patients give a history of an inversion injury[4] despite the theoretical mechanism.

Eversion (Abduction) Sprains

Partial tears of the medial collateral ligament, the deltoid ligament, (Figure 3) are not uncommon, but complete rupture is very rare due to the strength of the ligament.[1,2,3] Complete tears are nearly always associated with avulsion fractures of the tip of the medial malleolus and their presence should alert the clinician to the possibility of such a lesion,[1,2,3] and further evaluation by stress films under adequate anesthesia or arthrography is indicated.

Evaluation and Treatment

As previously noted, standard x-rays of the ankle seldom provide information concerning the severity of ligamentous ankle injuries. Stress films in inversion or eversion are of little use unless performed under adequate anesthesia.[1,8,10]

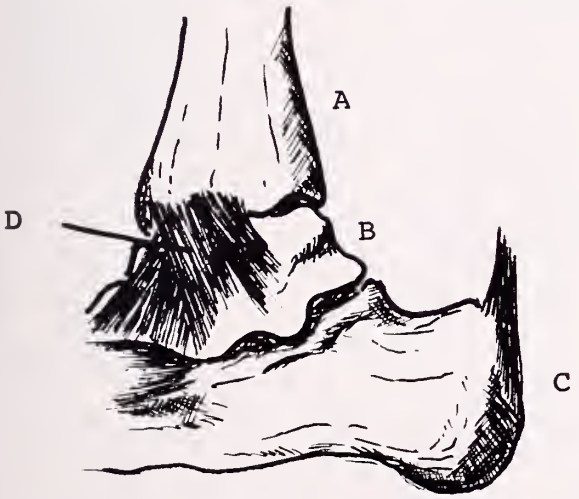

Figure 3. Diagrammatic medial view of the ankle: A, distal tibia; B, talus; C, calcaneus and achilles tendon; and D, deltoid ligament.

A talar tilt of greater than 10° with eversion is pathologic. With inversion stress, less than 5° is normal, 5° to 25° may be normal or abnormal, and greater than 25° is abnormal. Ankle arthrography has been shown to provide the most accurate information concerning both the site and severity of ligamentous injuries about the ankle and correlates well with findings noted at surgery.[3,9,12] The procedure is technically not difficult, has virtually no morbidity or complications, and is relatively easy to interpret, but is time consuming and probably not worthwhile unless surgery is contemplated or the diagnosis is in question.

The clinical examination, when performed carefully, allows one to accurately localize involved ligaments. This portion of the evaluation is commonly overlooked or performed in a cursory manner.

Treatment of Inversion Sprains: These injuries can be treated by early mobilization (ace wrap, elevation, crutches, with weight bearing allowed as pain subsides), or by cast immobilization (short leg walking cast x 3 weeks).[5,11,12] Surgical repair should probably only be considered in young athletes, and late repair gives results equal to immediate repair.[6,12]

Treatment of External Rotation Sprains: Same as above. Surgery is never required for this ligamentous injury.[5]

Treatment of Eversion Sprains: Partial tears can be treated as above. Complete tears (extremly uncommon) can be treated with either surgical repair or long leg casting with the ankle in eversion.[1,5]

Prognosis

The incidence of long term problems with instability, giving-way, and pain depend significantly on the age and activity levels of the patients.[5,11,12] In one series, 60 per cent of College-age patients complained of functional instability and/or pain with strenuous activity after treatment with casting,[11] as compared with 20 per cent in an older age group treated with either casting or early mobilization. In light of the satisfactory results obtained in late surgical repair, the more conservative initial treatment of early mobilization or casting should be used for most patients. Active exercises to strengthen muscle groups around the ankle has also been shown to favorably influence recovery and the long term prognosis of ankle sprains.[7] This may be of particular value in younger, active patients treated conservatively.

Summary

(1) Seventy-five per cent of acute sprains involve complete rupture of one or more ligaments, most commonly the anterior talofibular and calcaneofibular ligaments.

(2) Initial treatment should consist of early mobilization or plaster casting, realizing that a significant number of patients may have symptoms of long-term functional instability.

(3) Surgical repair may be considered in young athletes or in those individuals who are incapacitated by symptoms of functional instability.

(4) Those who are felt to be candidates for immediate surgical repair or those patients with a suspected or documented complete deltoid ligament tear should be referred to an orthopedic surgeon for treatment.

A list of references may be obtained by writing The Journal.

Anti-Cancer Drug Shows Promise

RESEARCHERS at Georgetown University in the nation's Capital have found that a relatively new anti-cancer drug found effective against leukemia in animals does not seem to have any major toxic effect on normal human tissue.

Dr. Philip S. Schein, Chief of the Medical Oncology Section at Georgetown's Vincent T. Lombardi Cancer Research Center, says the drug, a compound called chlorozotocin, promises to be another weapon in the arsenal against cancer.

"Significantly, in our earlier studies, chlorozotocin cured acute leukemia in mice without causing bone marrow toxicity," he explains. "Our recent study at Georgetown tested it further and found relatively no toxic effect on an essential function of human bone marrow taken from volunteers. This is in direct contrast to other anti-tumor drugs of the same class."

The other anti-tumor drugs of which he speaks also act aggressively against cancer, but they also suppress the function of bone marrow which is to produce normal blood cells. When these drugs are used, treatment must be interrupted periodically to allow the bone marrow a chance to recover. Cancer recurrence is common at this stage.

It is this damage to bone marrow that has been a major limiting factor in chemotherapy.

Doctor Schein began his research at the National Cancer Institute and continued working with the compound chlorozotocin at Georgetown. He and his colleagues have been working closely with scientists at the Southern Research Institute in Birmingham, Alabama, in the development of the compound.

According to Doctor Schein, the drug is undergoing further evaluation at the National Cancer Institute ". . . in preparation for possible clinical use against human tumors."

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* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check **serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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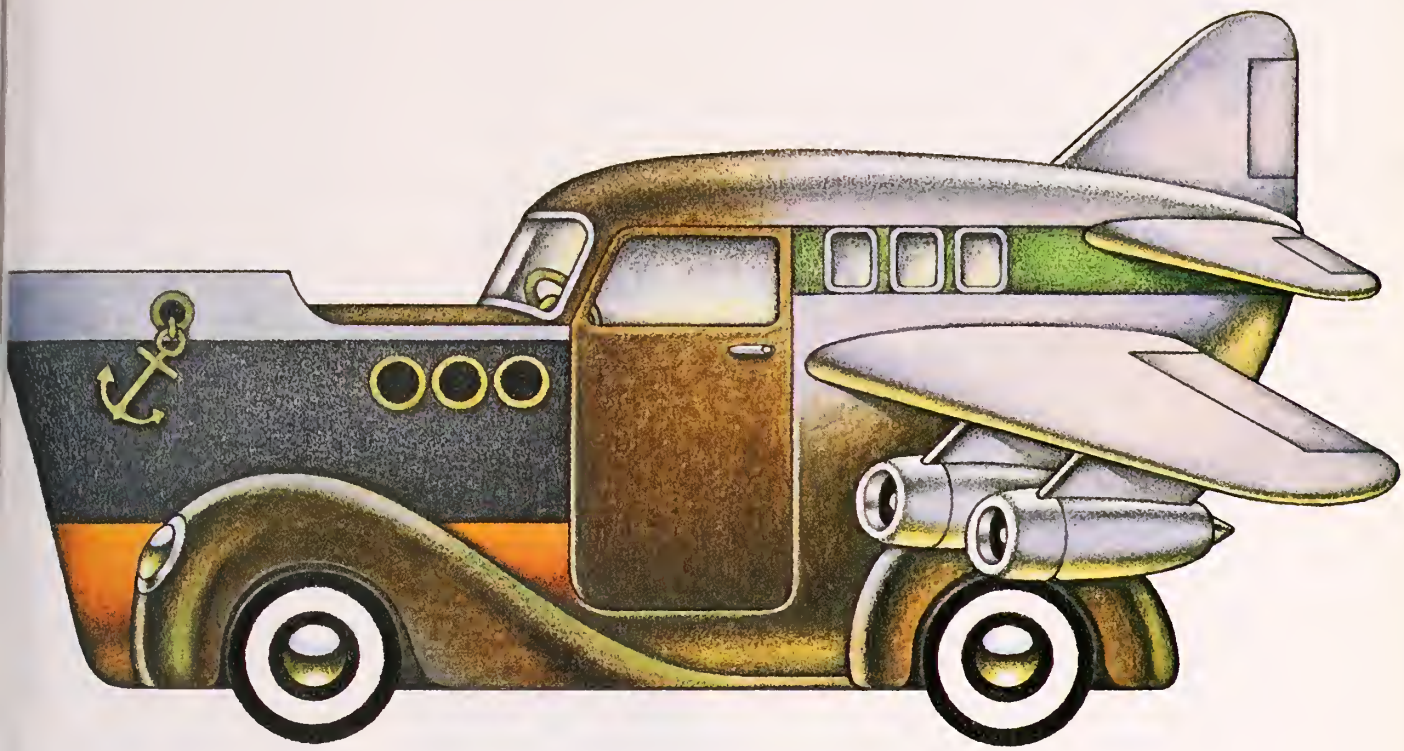

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called patie package insert has been around f a long time. Many physicians alre use written instruction sheets to provide patients with information about the drugs they are taking. A some physicians give verbal instr tions; but in too many instances these are what I call eye-glazing e ercises. I have seen patients sit wi glazed eyes listening to a rapid-fir lecture by a hurried physician wh has 20 people out in his waiting room. These patients aren't given sufficient understanding and ther fore do not follow instructions. So think the idea of an official packag insert for patients is a good one. Perhaps we should really think of this kind of information simply as extension of drug labeling.

The benefits of patient involvemen

Many physicians may not rea ize how frequently a patient obtair his drug information from Aunt Tillie or the next door neighbor. Ar this information is almost always bad or irrelevant to the case at har Furthermore, the incentive to go along with a prescribed program i slim if the only reading matter the patient receives, along with his pr scription, is a bill.

As an educator I am impress by the principle that the best way t get someone to do something is to involve him in the process. So the

I think there are advantages a well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medi cal terms to describe complication or possible sequelae of disease or treatment, you may frighten the pa tient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a packag insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligatior to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

n purpose of drug information he patient is to get his coopera- in following a drug regimen.

paration and distribution of ent drug information

We would hope to amass infor- ion from physicians, medical eties, the pharmaceutical indus- and centers of medical learning. ultimate responsibility for uni- n labeling must, however, rest the Food and Drug Administra- . There is nothing wrong with agency saying, "this informa- is generally agreed upon and refore it should be used," as long our process for getting the infor- tion is sound.

Distribution of the information problem. In great measure it uld depend on the medication in estion. For example, in the case an injectable long-acting proges- one, we would think it mandatory issue two separate leaflets—a ort one for the patient to read be- e getting the first shot and a long e to take home in order to make a cision about continuing therapy. this case, the information might put directly on the package and t removable at all. But for a medi- tion like an antihistamine this ormation might be issued sepa- tely, thus giving the physician the tion of distribution. This could eserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

---

ly the doctor can remove that fear 20 or 30 minutes of conversation.

I'm not suggesting that we thhold any information from the tient because, first of all, it would totally dishonest and secondly, it ould defeat the very purpose of the sert. I do think that a patient on the rth control pill should know about e incidence of phlebothrombosis.

If you're going to tell a patient e incidence of serious adverse re- ctions, then you have to tell him at a concerned medical decision as made to use a particular medi- ation in his situation after careful onsideration of the incidence of omplications or side effects.

motionally unstable patients pose special problem

There are patients who, be- ause of severe emotional problems, ould not handle the information ontained in a patient package in- ert. Yet if we are going to have a package insert at all, we just can't ave two inserts. I think we might imply have to tell the families of hese patients to remove the insert rom the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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P·M·A

A message from . . .

The President

'HOW MAJESTIC AND HOW GRAND!'

ALTHOUGH I am a native West Virginian, prior to my election as President of the West Virginia State Medical Association, there were many spots in this beautiful and rugged mountain State I had never seen. It was both interesting and enjoyable to visit our neighboring states and to meet those with comparable responsibilities. But the greatest pleasure in my 12-month term was visiting all of you in your local settings. In Doctor Kissinger's words, the trips were both "useful and productive"—and I am a better West Virginian for the experience.

Traveling to Weirton, Williamson, Oak Hill, Martinsburg and all points between, it was great fun to see old friends who for so long have carried the West Virginia State Medical Association on their shoulders. The heartening news, however, was the large number of younger physicians and their spouses who are intensely concerned about our Association, and wish to take an active role in its activities. Doctor Leckie assures me these physicians will be mustered into service.

In the course of the past year, the Association experienced moments high and low. The high moments were no problem. True to my mother's philosophy, the heat in the crucible was the test and we emerged from it stronger and wiser. Such did not just happen; the tempering of cool heads put the welfare of others before self.

Many times, I have thought of the character of our organization. Very briefly its hallmark is *compassion* for human kind; *dedication* to the noblest profession, and *loyalty* to each other in our uncommon cause. I salute you all for expressing and preserving these ideals. I humbly thank you from the bottom of my heart for the priceless opportunity to taste them.

With God's help, let us press on!

WILLIAM E. GILMORE, M.D., *President*

Bill Gilmore

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EDITORIALS

ANNUAL CHANGE OF THE GUARD

Within the next few weeks, in the traditional Annual Meeting setting at The Greenbrier, The West Virginia State Medical Association once again will effect a changing of the guard. The Presidency will pass from Dr. William E. Gilmore of Parkersburg, a tireless and intense leader during the past year, to Dr. Jack Leckie of Huntington, who promises to bring an equal amount of energy and concern into his new assignment.

With Doctor Gilmore, perhaps the key word has been "service." He stressed the need for that kind of dedication from every West Virginia physician in his first President's Page in the September, 1974, issue of the *Journal.* Doctor Gilmore did more than call for service and dedication—he exhibited those traits throughout a demanding 12 months and never hesitated to assume responsibility and exercise true leadership as the occasion frequently demanded.

It's increasingly appropriate, year after year, that the change in Association leadership occur against the background of an outstanding scientific program at The Greenbrier. Medical education as a vital tool toward the better patient care the public is demanding continues to assume an increasingly important role in the professional life of every physician. Professional standards review must be developed in the closest relationship with medical education if that program really is to grow into anything with a positive significance. In fact, professional review and medical education must be inseparable—and one of the great challenges facing the West Virginia

William E. Gilmore, M. D., President

physician, as well as those elsewhere, is to bring about that cohesion.

Doctor Gilmore has noted that, in his year as President, basic concerns of physicians have shifted from the general arena of Professional Standards Review Organization (PSRO) activity to potentially awesome problems centered about professional liability. Doctor Leckie now will move to the firing line as the Medical Association and other state organizations turn their attention to the fashioning of desirable legislation which hopefully can ward off the threats to patient care that have caused such real and serious dilemmas elsewhere.

The Medical Association membership, to the last physician—as well as the leadership—must become increasingly concerned about its organization, itself, in the face of present-day challenges that go far beyond just the professional liability question. Perhaps never before has there been a greater need for strong, vibrant, even militant components of organized medicine at the local, state and national level. Governmental programs continue to spring from apparently inexhaustible sources, with regulatory and other features threatening to hamstring the effective delivery of health care. Presumably, the intent behind most of these efforts, at least in the beginning, is honest and sincere. But the actual development of them—the form they take—the practical impossibility of actually implementing them in any positive and effective manner—these are things that cause widespread dismay, and probably will mean nothing to the patient except new bureaucratic roadblocks to the care he needs; additional confusion; and probably higher costs throughout the entire health care system.

The scientific program at The Greenbrier, from the general sessions through the various section meetings of specialty organizations, again will reflect progressive development of medical care, and the capabilities of the American system to deliver that care. There is the thought that such progress now has led the patient and the public often to expect too much in the way of results. Overall, that is a positive rather than a negative element, and just another significant bit of evidence in support of the system's real strengths.

An effective union of medicine's scientific and technological triumphs with age-old physician concern for the patient; the art of medicine; and a strong physician voice, through the channels of organized medicine, in the legislative and other developments of the day—this is a combination that would appear to hold the greatest potential for a strong health care system. West Virginia physicians need to "serve," in the words of Doctor Gilmore, in such a way that they exert the greatest possible influence in making this potential become reality.

DIFFICULT TO TRACE MOTHERS WHO INGESTED DES IN PREGNANCY

In 1970 Dr. A. L. Herbst and Dr. R. E. Scully reported seven cases of adenocarcinoma of the vagina in adolescent girls which appeared to be related to ingestion of diethylstilbestrol (DES) by the mothers of these girls during their pregnancies.[1] Since that time considerable attention has been turned to this problem and it has been noted that approximately 35 to 40 per cent of female babies born to expectant mothers who are treated with diethylstilbestrol will have certain, rather typical, pathological lesions in the lower genital tract. These lesions include a concentric ridge around the cervix giving it a "pseudopolyp" appearance and adenosis of the vagina.[2]

At this time the chance of subsequent development of cancer in patients with these lesions is unknown. In his article in *Obstetrics and Gynecology* in September, 1972, however, Doctor Herbst states, "In view of the probably large number of women who took stilbestrol or related drugs during pregnancy, and the relatively few cases of carcinoma discovered thus far, the risk (of carcinoma) appears small."[2]

In order to assess the problem of how many female babies were born to mothers who had received diethylstilbestrol in the southern West Virginia area some years ago, I requested the record room of the Bluefield Sanitarium to spot check the month of January, 1955. The records revealed there were 105 births registered in that month. Of these 105 births, 77 charts could be located on microfilm. Of the 77 charts, 33 recorded the babies were females.

The records of these mothers were carefully checked to see if any had received stilbestrol therapy during their antenatal course. Four mothers were found to have received stilbestrol in the first trimester of their pregnancy because of bleeding or cramping, or some threat to the pregnancy. It was possible to locate two of

these mothers by the addresses given in the records. The other two mothers, however, had moved to unknown addresses and could not be located.

In going through the 33 charts it was found that a number of the patients had received antenatal care elsewhere. A physician in one of the surrounding smaller communities in the coal fields had given the antenatal care, and the patients had come to the hospital only for delivery. In these cases it was not possible to ascertain whether they had received DES during the pregnancy.

On the basis of these findings I would estimate that some 10 to 15 years ago there were 40 to 50 female babies delivered here per year whose mothers received DES during their pregnancy. This should give a population of between 500 and 1,000 young adolescent women who are candidates for vaginal adenosis.

To retrieve the information on the four positive cases, two of whom could not be located, five days of work were required for one person in the record room. This would indicate that to locate all of the postulated 500 adolescent girls in the area who are candidates for vaginal adenosis it would require one record room person working on no other project for two years. Obviously, this approach to the problem is not a workable one.

As an alternative approach, I would suggest that on every pelvic examination careful attention be given to note if there is a hooded, circumcervical ridge, or any evidence of adenosis. In such cases a careful history should be obtained concerning the possibility of maternal diethylstilbestrol ingestion. These patients should then be followed more closely than usual with speculum and digital examinations. Unfortunately, Papanicolaou smears are not too valuable in demonstrating vaginal adenosis since the lesion is sub-mucosal.—*Guest Editorial by T. Keith Edwards, M.D., Member of the Staff, Department of Obstetrics and Gynecology, Bluefield Sanitarium, Bluefield, West Virginia.*

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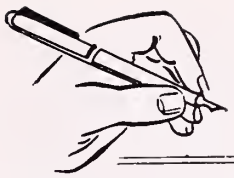


Our Readers Speak

OBJECTS TO EDITORIAL

I am writing with regards to an editorial entitled "One Solution" which appeared in the West Virginia Medical Journal for June, 1975. I of course do not know the intention of the author of the editorial, but I do object to its tone and I feel inflammatory material of that type has no place being published on the state wide level.

James M. Garvey, M. D.
3600 West Street
Weirton, W. Va. 26062

Exercise Alone In Large Amounts Can Take Off Weight

Exercise alone can take off excess pounds, if you can stay with a program that involves quite a bit of exercise every day, says a research report in a recent issue of *Archives of Internal Medicine,* a publication of the American Medical Association.

It had been widely assumed that only a careful diet supplemented by exercise could bring any substantial weight loss. But Grant Gwinup, M. D., of the University of California at Irvine, reports that 11 obese women in his study lost from 10 to 38 pounds and averaged 22 pounds loss during a period of one year from exercise alone.

All of the patients selected brisk walking as their form of exercise. There was no weight loss until the brisk walk went beyond a half hour a day. The greatest loss came from the overweight ladies who walked two to three hours a day, says Doctor Gwinup.

Weight loss from exercise is slow, averaging only about half a pound a week. If the exercise is stopped for a few days, the pounds creep back quickly.

The exercise program must be in addition to the customary physical activity of the day. But the weight loss will follow, even though exercise increases the appetite and the patients actually eat more food each day. There were no dietary restrictions at all during the year's trial.

"Although exercise alone does not provide an easy answer to the problem of obesity, for certain subjects it seems to offer an alternative to dieting that will produce weight loss and may, in addition, provide the other health benefits often attributed to exercise," Doctor Gwinup declares.

Motivation is the critical factor. Less than a third of the obese patients who began the study continued for the full year of daily, extended exercise, he says.

GENERAL NEWS

Rep. Staggers And Dr. Max Parrott Headliners For Annual Meeting

Congressman Harley O. Staggers of West Virginia and Dr. Max H. Parrott of Portland, Oregon, will be featured speakers during the 108th Annual Meeting of the West Virginia State Medical Association this month.

Doctor Parrott was installed as the American Medical Association's 130th President in June. He will address the first session of the Association's House of Delegates at 2:30 P. M. on Wednesday, August 20—opening day for the Annual Meeting at The Greenbrier in White Sulphur Springs.

Congressman Staggers will deliver the third annual "Thomas L. Harris Address" as the keynote speaker for 9 A. M. opening exercises on Thursday preceding the first general scientific session. This session and all other scientific sessions will be held in Colonial Hall.

The Annual Meeting will continue through Saturday afternoon, August 23, when Dr. Jack Leckie, Huntington family physician, will be installed as Association President during the second and final session of the House of Delegates. Doctor Leckie will succeed Dr. William E. Gilmore of Parkersburg as President.

Doctor Parrott, a native of Canada, moved to Oregon in his youth, becoming a naturalized United States citizen. He is a graduate of Oregon State College and received his M. D. degree in 1940 from the University of Oregon Medical School. Immediately after finishing his internship training in Oregon, Doctor Parrott, then an anesthesiologist, entered the U. S. Army Medical Corps, where he attained a distinguished record during World War II in Sicily, Normandy and Great Britain.

Following the war, Doctor Parrott took postgraduate specialty training in obstetrics and gynecology at the University of Michigan and then returned to Portland to open his practice. He now practices there with four associates, also obstetrician-gynecologists.

Doctor Parrott is a member of the American Board of Obstetrics and Gynecology, the American College of Obstetrics and Gynecology, and the Pacific Coast Obstetrical and Gynecological Society. He is a member of ACOG's Committee on Gynecological Practice.

A Past President of the Oregon Medical Association, Doctor Parrott also is a former Chairman of the AMA's Board of Trustees, having served three terms of three years each on the Board. Before being elected to the Board, he had been an Oregon member of the AMA's House of Delegates for five years and also had been a member of the AMA's Council on Legislation.

Congressman Staggers, of Keyser, who represents West Virginia's Second District, is Chairman of the Committee on Interstate and Foreign Commerce of the United States House of Representatives. He has served on the Committee since 1951, being elected Chairman in 1966.

Mr. Staggers has served as Assistant Whip in the House since 1955. He formerly was a member of the House Post Office and Civil Service Committee as well as the House Committee on Veterans' Affairs. He first was elected to the House in 1948, and has served continuously since that time.

Max H. Parrott, M. D.

Convention Timetable

The first general scientific session will follow 9 A. M. opening exercises on Thursday, August 21. The Friday session will begin at 9:30 A. M., and the session on Saturday, at 9 A. M.

The first session of the House of Delegates will be on Wednesday afternoon, August 20, beginning at 2:30 o'clock. The second session will be on Saturday afternoon beginning at 2:30 o'clock.

Mr. Staggers attended public schools in Mineral County and received an A. B. degree in 1931 from Emory and Henry College in Emory, Virginia. That college later bestowed upon him the honorary degree of Doctor of Laws. He did postgraduate work at Duke University and also has received the honorary degree of Doctor of Laws from Davis and Elkins College, West Virginia University and West Virginia Wesleyan College.

Before entering public service, Mr. Staggers coached and taught in high schools for two years, and later coached at Potomac State College in Keyser. He was elected Sheriff of Mineral County in 1937, and served in that position until 1941.

Presidential Address

Doctor Gilmore, who is a surgeon in Parkersburg, will deliver his address as the retiring Association President prior to the installation of Doctor Leckie at the final House session on Saturday afternoon.

Pre-Convention Meetings

The Association's Council will have a pre-convention meeting at 10 A. M. on Wednesday, August 20. Its Chairman, Dr. A. Thomas McCoy of Charleston, will preside. The first House session will follow in Colonial Hall at 2:30 P. M. Doctor Gilmore will be presiding officer.

From 6:30 to 7:30 P. M. on Wednesday, a President's Reception for Honor Guests will be held on the Old White Patio.

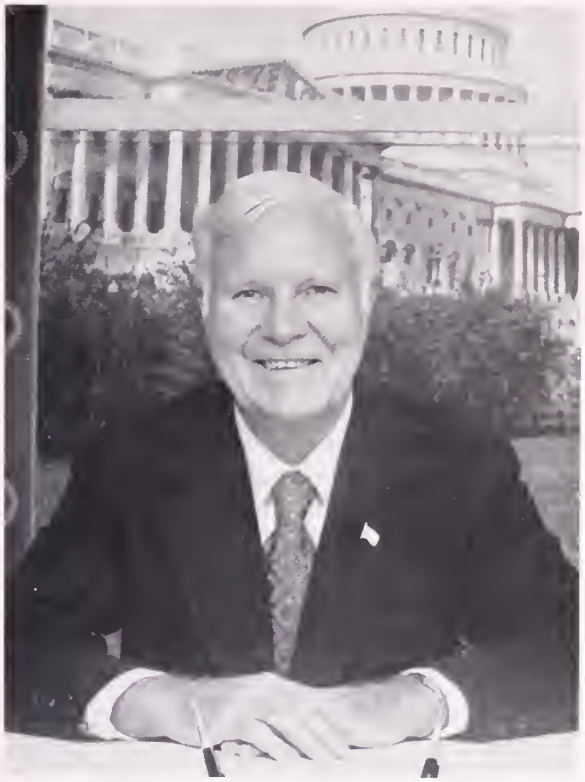
General Scientific Sessions

As noted, all three of this year's general scientific sessions will be held in Colonial Hall, with the first to follow 9 A. M. opening exercises on Thursday, August 21. The other two sessions will be at 9:30 A. M. on Friday and 9 A. M. on Saturday.

Luncheon for Past Presidents

A luncheon honoring Past Presidents of the West Virginia State Medical Association will be held at The Greenbrier on Thursday, August 21, during the 108th Annual Meeting.

Dr. A. Thomas McCoy of Charleston, Immediate Past President, will preside, and invitations have been extended to all the Association's Past Presidents.



Congressman Harley O. Staggers

In keeping with the general program format initiated last year to leave the afternoons open for enjoyment of the recreational facilities at The Greenbrier, most of the sections and affiliated socities of the Association will hold Friday breakfast meetings. Many of the guest speakers have accepted invitations to present talks at these meetings.

A change this year will be the location of the scientific exhibits, which will be Eisenhower Hall, Parlors A and B, located directly beneath Colonial Hall.

Formal Opening Exercises

Doctor Gilmore will call the Annual Meeting to order at the 9 A. M. session on Thursday, with Dr. Joe N. Jarrett of Oak Hill to give the invocation. Doctor Gilmore will make welcoming remarks and Dr. Philip M. Sprinkle of Morgantown, the 1975 Program Committee Chairman, and other members of his Committee, will be introduced. The first general scientific session will be held following the address by Congressman Staggers.

Dr. Raymond B. Weiss of Morgantown, Chairman of the Division of Medical Oncology at the West Virginia University School of Medicine, will serve as moderator for the "Symposium on New Concepts in Cancer Diagnosis and Therapy (Breast Cancer, Lymphoma, Melanoma)." The speakers will be:

Vincent T. DeVita, Jr., M. D., Director, Division of Cancer Treatment of the National Cancer Insti-

Jack Leckie, M. D.

tute, Bethesda, Maryland; Paul B. Chretien, M. D., Department of Surgery, National Cancer Institute; Ariel C. Hollinshead, Ph. D., Professor of Medicine, Laboratory for Virus and Cancer Research, George Washington University School of Medicine, Washington, D. C.; and Arvin S. Glicksman, M. D., Chairman, Department of Radiation Oncology, Rhode Island Hospital, Providence, Rhode Island.

Thursday Afternoon

A luncheon honoring Past Presidents of the State Medical Association will be held at 12:30 P. M. Thursday in the Tyler Room with Dr. A. Thomas McCoy scheduled to preside. The Association's Resolutions Committee, with Dr. Richard E. Flood of Weirton presiding, will meet at 2 P. M. Thursday in the West Virginia Room.

Friday Breakfast Meetings

The Friday morning breakfast meetings will begin at 8 o'clock. The meetings, speakers (where scheduled) and their topics are as follow:

West Virginia Academy of Ophthalmology and Otolaryngology, Dr. Robert E. O'Connor of Charleston presiding, Washington Room, Virginia Wing;

Section on Internal Medicine, Dr. Harold Selinger of Charleston presiding; "Psychological Aspects of the Dying Patient" (Panel), Dr. Vincent T. DeVita, Jr., Bethesda, Maryland; Ariel C. Hollinshead, Ph. D., and Dr. James M. Moss, Washington, D. C.; Dr. Thomas G. Skillman, Columbus, Ohio; and Dr. Stanley R. Shane, Dr. Raymond B. Weiss and Miss Carolyn Bailey, R. N., Morgantown, Lee Room, Virginia Wing;

West Virginia Obstetrical and Gynecological Society and Section on Urology, Drs. Robert P. Pulliam of Beckley and A. Thomas McCoy presiding; Dr. Charles A. White, Morgantown, "Stress Incontinence," Tyler Room;

Section on Neurology, Neurosurgery and Psychiatry, Dr. Arthur L. Poffenbarger of Charleston presiding.

Section on Orthopedic Surgery, Dr. Robert L. Ghiz of Charleston presiding; Dr. Hampar Kelikian, Emeritus Professor of Orthopedic Surgery, Northwestern University Medical School, Evanston, Illinois, "Metatarsalgia and Allied Deformities," Jackson Room;

Section on Surgery, Dr. S. William Goff of Parkersburg presiding; Dr. Paul B. Chretien, "New Concepts in Surgical Treatment of Melanoma," Buchanan Room;

West Virginia Radiological Society, Dr. James T. Smith of Charleston presiding; Dr. Arvin S. Glicksman, "Computer Assistance in the Practice of Radiation Oncology," Director's Room.

Second General Session

Dr. Robert P. Pulliam of Beckley will be the moderator at the second general scientific session beginning at 9:30 A. M. on Friday, with speakers and their topics to include:

Russell V. Lucas, Jr., M. D., Professor of Pediatrics, University of Minnesota Medical School, "Indications for Operative Intervention in Congenital Heart Disease;" Charles A. White, M. D., Professor and Chairman of the Department of Obstetrics and Gynecology, WVU School of Medicine, Morgantown, "High Risk Pregnancy;" and Paul B. Chretien, M. D., Bethesda, Maryland, "Integration of Conventional and Immunotherapy."

Schedule For Friday Afternoon

The Association's Cancer Committee will meet at 12:15 Friday in the Main Dining Room with Dr. Alvin L. Watne of Morgantown presiding.

The West Virginia Chapter of the American Academy of Pediatrics will meet at 2 P. M. in the Fillmore Room with Dr. Barbara Jones of Morgan-

House of Delegates To Meet Twice During Meeting

The first session of the House of Delegates during the Annual Meeting at The Greenbrier will be convened at 2:30 P. M. on Wednesday, August 20. The second and final session of the House of Delegates will be held at 2:30 P. M. on Saturday, August 23.

The 1975 Program Committee

Dr. Philip M. Sprinkle of Morgantown is Chairman of the Program Committee for the 108th Annual Meeting of the West Virginia State Medical Association. Other members of the Committee are Drs. R. J. Bailey of Parkersburg, Fernando G. Giustini of Wheeling, Robert D. Hess of Bridgeport, Jack Leckie of Huntington and Joseph T. Skaggs of Charleston.

town presiding. Dr. Russell V. Lucas, Jr., will speak on "The Infant with Congenital Heart Disease."

Scheduled for 4 P. M. are meetings of the West Virginia Chapter of the American Society of Internal Medicine, with Dr. John F. Otto, Jr., of Huntington presiding, in the Jackson Room; and the West Virginia District Branch, American Psychiatric Association, with Dr. Thomas S. Knapp of Charleston presiding, in the Director's Room.

The Association's Committee on Nominations will meet at 5 P. M. in the Lee Room, Virginia Wing, with Dr. Harry S. Weeks, Jr., of Wheeling presiding.

Saturday Morning Session

A "Mini-Diabetic Seminar" will begin the third general scientific session at 9 A. M. Saturday. Dr. John W. Traubert, Chairman of the Department of Family Practice at WVU, will be the moderator. The speakers and their topics will be:

James M. Moss, M. D., Clinical Associate Professor of Medicine, Georgetown University School of Medicine, Washington, D. C., "Current Therapy for the Ambulatory Diabetic;" Thomas G. Skillman, M. D., Professor of Medicine, Ohio State University College of Medicine, Columbus, "Mechanisms of Diabetic Stigmata;" and Stanley R. Shane, M. D., Professor of Medicine, WVU, "Management of Ketoacidosis."

This session also will include a presentation by Doctor Traubert on "Family Practice in West Virginia—1975."

No Registration Fee for Members

Members of the West Virginia State Medical Association will not be assessed a registration fee in connection with the 108th Annual Meeting at The Greenbrier in White Sulphur Springs, August 20-23.

Interns, residents and medical students also will be registered without charge.

There will be a registration fee of $50 for out-of-state physicians attending the meeting.

Nominating Committee To Meet On Friday, Aug. 22

The State Medical Association's Committee on Nominations will hold a 5 P. M. meeting on Friday, August 22, in the Lee Room of The Greenbrier.

The Committee will make nominations to the House of Delegates for President Elect, Vice President and Treasurer, and for Delegate and Alternate Delegate to the American Medical Association.

Association By-Laws also provide that nominations may be made from the floor for these offices, to be filled by the House in balloting at its final session on Saturday, August 23, the final day of the Association's 108th Annual Meeting.

Dr. Harry S. Weeks, Jr., of Wheeling will serve as Chairman of the Committee on Nominations, with other members to include: Drs. Robert R. Weiler, Wheeling; Charles E. Andrews, Morgantown; Robert W. Bess, Jr., Piedmont; Robert D. Hess, Bridgeport; Louis W. Groves, Jr., Richwood; and David F. Bell, Jr., Bluefield.

In addition, one of the Kanawha Medical Society's two Councilors will serve on the Committee under provisions of the By-Laws. That representative will be Dr. W. Alva Deardorff of Charleston.

Pathologists To Meet

The West Virginia Association of Pathologists will meet at noon on Saturday in the Director's Room with Dr. Vicente Anido of Morgantown presiding.

Second House Of Delegates Session

Doctor Gilmore again will be the presiding officer at the second and final House of Delegates Session in Colonial Hall at 2:30 P. M. on Saturday.

Along with his Presidential Address and the installation of Doctor Leckie, the agenda will include election of other Association officers and consideration of several resolutions and other business items.

Medical School Alumni Events

Cocktail parties will be held by the West Virginia University School of Medicine's Alumni Association Thursday evening, and by the University of Virginia Medical School Foundation and the West Virginia Chapter, Medical College of Virginia Alumni Association, Friday evening.

Dr. Clark K. Sleeth will be in charge of the WVU festivities in the West Virginia Room Thursday at 6 P. M. Drs. McLemore Birdsong, James C. Respess, J. Brookins Taylor and William C Morgan will serve in the same role for the University of

Virginia affair at the same hour Friday evening in the Chesapeake Bay. Dr. C. Vincent Townsend of Martinsburg will be in charge of the Medical College of Virginia event at 6:30 P. M. Friday on the Old White Patio.

Friday Night Auxiliary Ball

The 51st Anniversary Ball will be sponsored by the Woman's Auxiliary to the State Medical Association at 10 P. M. Friday in Colonial Hall. The Parkersburg Academy Auxiliary, with Mrs. Robert Sams serving as Chairman, will host the dance.

Saturday Evening Reception

New officers of the State Medical Association will be honored at a cocktail party and reception from 6:30 to 7:30 P. M. Saturday on the Colonial Hall Terrace. All members of the Association and Auxiliary and their families, representatives of scientific exhibitors and convention guests are cordially invited.

Scientific Exhibits

As noted, the scientific exhibits will be housed in Eisenhower Hall, which is located directly underneath Colonial Hall. Physicians, members of the Auxiliary and their guests are urged to visit the exhibits, which will be open from 8:30 A. M. to the close of the morning sessions.

Advance registration for the Annual Meeting at The Greenbrier has been heavy. As this issue of *The Journal* went to press, more than 600 persons had made reservations.

Program Completed For PG Course In Huntington

Plans are complete for a one-day postgraduate course on "Disease of the Peripheral Vascular System" to be held on Saturday, September 20, at the new downtown Holiday Inn on Third Avenue in Huntington. The course is being sponsored by the Marshall University School of Medicine, the American Heart Association and Saint Mary's Hospital in Huntington.

The program will begin with registration at 8 A. M. and conclude at 4:30 P. M. Opening remarks will be made at 9 A. M. by Dean Robert C. Partlett, M. D., of the Marshall University Medical School.

The speakers and their topics will be:

"Atherogenesis and Clinical Evaluation of Peripheral Vascular Disease"—John A. Spittell, Jr., M. D., Professor of Internal Medicine and Cardiovascular Disease, The Mayo Clinic, Rochester, Minnesota; "Non-Invasive Evaluation of Peripheral Vascular Disease"—William Gee, M. D., Head, Vascular Surgery Section, Department of Surgery, National Naval Medical Center, Bethesda, Maryland; "Angiography of Peripheral Vascular Disease"— Daniel Seale, M. D., Radiology Department, Martha Jefferson Hospital, Charlottesville, Virginia;

"Vasospastic Disorders"—Doctor Spittell; Panel Discussion, Charles R. Hamlin, M. D., Huntington vascular surgeon, moderator; "Aorto-Iliac Occlusive Disease"—Edwin J. Wylie, M. D., Professor of Surgery, University of California School of Medicine, San Francisco;

"Aortic and Peripheral Arterial Aneurysms"—Calvin B. Ernst, M. D., Associate Professor of Surgery, University of Kentucky College of Medicine, Lexington; "Evaluation and Management of Cerebrovascular Disease"—Clark H. Millikan, M. D., Professor of Neurology, Mayo Graduate School of Medicine; "Surgical Rx of Extracranial Cerebrovascular Disease"— Doctor Wylie;

"Renovascular Disease"— Doctor Ernst; and Panel Discussion, K. V. Raman, M. D., Huntington vascular surgeon, moderator.

The program is approved for six hours of Category 1 credit toward the Physician's Recognition Award of the American Medical Association—and for six hours of prescribed credit by the American Academy of Family Physicians.

For further information, contact the office of Drs. C. R. Hamlin and K. V. Raman, Program Co-Chairmen, 1042 Sixth Avenue, Huntington 25701.

State Heart Association Annual Meeting September 25-27

The annual meeting of the American Heart Association, West Virginia Affiliate, will be held September 25-27 at the Lakeview Country Club in Morgantown.

Committee meetings will be held and exhibits set up on Thursday, September 25.

Friday's schedule will include registration begining at 8 A. M., the General Assembly from 9 to 10 A. M., scientific and lay sessions held concurrently from 10 A. M. to 1 P. M., an awards banquet from 1 to 3 P.M., continuation of General Assembly from 3:30 to 5 P. M., the president's reception, and the annual banquet.

On Saturday, a Board of Directors meeting will be held from 9 to 11 A. M.

The scientific session on Friday, "New Concepts In Practical Cardiology," will include discussion on echocardiography, cardiac graphics, stress EKG diagnosis, cardiac shock management, and cardiac rehabilitation.

The program for the concurrent lay session on Friday, "Dealing With a Heart Attack," will include "Cardiopulmonary Resuscitation in West Virginia," "The Essence of CPR," a CPR practice session, and "Exercise and Your Heart."

For additional information contact the American Heart Association, West Virginia Affiliate, 211 35th Street, S.E., Charleston 25304 (telephone 346-5381).

Sports Activities Scheduled For Doctors, Auxiliary

Golf and tennis competition for both State Medical Association members and their wives again will be held in conjunction with the annual meetings of the Association and its Auxiliary at The Greenbrier this month.

There also will be a skeet-shooting tournament with Dr. O. M. Harper of Clendenin in charge.

Dr. Joseph A. Smith of Dunbar is in charge of the Men's Medical Golf Tournament. He announced that there will be a $5 registration fee and competing physicians may play their rounds during any morning or afternoon on Thursday through Saturday, August 21-23. Specific starting times and other rules will be in effect with this year's golf play and those planning to take part should make sure they are familiar with those rules.

Competitors must inform the starter when they begin their official 18 holes of play. All tournament play must be completed by 4 P. M. on Saturday to permit the awarding of prizes during an evening reception honoring new officers of the State Medical Association.

There will be a new golf trophy this year, the pervious one having been retired last year by Dr. George A. Curry of Morgantown by winning his third tournament.

Mrs. Joseph T. Mallamo of Fairmont is Chairman of the Auxiliary's golf tournament which is scheduled for Friday afternoon, August 22.

Dr. Harold Selinger of Charleston will serve as Chairman of the men's tennis tournament for physicians on Thursday afternoon and Mrs. Prospero Gogo of Beckley will be Chairmen for the Auxiliary tournament on Friday afternoon. Competition in both tournaments will be limited to doubles and those interested in playing should register at the Pro Shop at the tennis courts.

Doctor Harper said winners in the skeet-shooting tournament will be named in the 12 gauge and 20 gauge competition. He has advised interested physicians to furnish their own shotguns. There will be no registration fee.

U. S. Health Examination Survey To Start In Three Counties

The Health Examination Survey of the U. S. Public Health Service will be conducting operations in the West Virginia counties of Calhoun, Clay and Roane beginning August 11, it was announced by Edward B. Perrin, Ph. D., of Rockville, Maryland, Director of the USPH's National Center for Health Statistics.

The initial phase will begin with interviewers from the U. S. Bureau of the Census calling on selected households in those counties to obtain certain demographic information and to identify and select about 120 persons for the examination. Examinations will be conducted from September 3 through September 18 in the survey's mobile examination center.

Physicians having questions about the survey have been advised to contact Mr. Charles Gallese of Doctor Perrin's staff at (301) 443-1626.

Convention On Emergency Medical Services August 15-16

A State convention on Emergency Medical Services will be held August 15 and 16 at Morris Harvey College in Charleston. The convention is being sponsored by Morris Harvey, the Charleston Division of the West Virginia University Medical Center, and the Charleston Area Medical Center—Division of Allied Health.

The convention theme of "EMS Today" will be addressed by the principal speaker, Dr. Costas P. Lambrew of New York City, and various State physicians. The schedule will include a Saturday evening dinner at $5 per person. There will be exhibits of emergency equipment.

Registration will begin on Friday and Saturday at 8 A. M. There is no fee. For additional information contact Lillian D. Morris, R.N., Coordinator, Emergency Medical Services, CAMC (telephone 348-7647).

State Anesthesiologists Elect Officers At Meeting

New officers of the West Virginia State Society of Anesthesiologists were elected at its Annual Meeting held on June 21 in Morgantown. They are:

Drs. Robert S. Robbins, Wheeling, President; Jeanne A. Rodman, Morgantown, Vice President; Richard B. Knapp, Morgantown, Secretary-Treasurer; and John F. I. Zeedick, Charleston, Delegate to the American Society of Anesthesiologists.

Toll-Free Line For VD Case Reporting Now Available

A new toll-free watts line recently was made available by the State Department of Health for physicians to utilize on a 24-hour basis to report venereal disease cases and receive venereal disease services.

The direct line of communication to the Department will give physicians an immediate source for requesting various VD services such as darkfield examinations, VD consultation, case follow-up, and case reporting. After office hours and on holidays a recording device will be engaged to record messages. Appropriate action regarding the message will be initiated the next working day.

The number to dial is 800 642-8244.

A letter announcing the toll-free line was to go to all physicians in the State from Dr. N. H. Dyer, State Health Director.

State Medical Association Lists Names of New Members

The following is a list by component societies of new members of the West Virginia State Medical Association elected from January 1 through June 30, 1975:

Brooke

Kurwa, R. R. — Wellsburg

Cabell

Klinestiver, Donald G. — Milton
Raman, K. V. — Huntington
Touma, Omayma T. — "
Webb, Deleno H., III — "
Ziegel, Howard V. — "

Eastern Panhandle

Chapman, George A. — Martinsburg
Funderburk, M. Stewart, Jr. — Berkeley Springs
Hillgard, Else — Martinsburg
Jimenez, Hernando — "
Menon, K. G. — Ranson
Pischnotte, William O. — Martinsburg
Quarantillo, Edward P., Jr. — Berkeley Springs
Wanger, Alexander — Martinsburg

Fayette

Asinas, Teodorico — Oak Hill
Ullah, Anwar — " "

Greenbrier Valley

Ednacot, Romeo R. — Ronceverte
Perez, Helen R. — "
Ricketts, Edward A., Jr. — White Sulphur Springs
Tsai, Thomas — Rainelle

Hancock

Packovich, Milan J. — Weirton

Harrison

Bondy, H. Eugene — Fairmont
Kirdnual, Amnath — Clarksburg
Lobo, Narciso L. — "

Kanawha

Avashia, B. H. — Charleston
Leef, Johnsey L., Jr. — "
McConnell, Lewis H. — "
Popescu, Donald W. — "
Pratt, Lee H. — "
Shanmugham, N. T. — South Charleston
Shiels, Thomas V. — " "
Smith, Ralph S., Jr. — Charleston
Wanderman, Nancy C. — "
Wanderman, Richard G. — "

Logan

Galang, Leandro — Logan

Marion

Bhattacharyya, Ardhendu — Fairmont
Moya, Carlos — "
Williams, Lawrence A. — "

Marshall

Dillow, Ronald W. — Glen Dale
Villaverde, Manuel A. — " "

Mason

Chaksupa, Montrie — Pt. Pleasant
Jamora, Ismael O. — " "

McDowell

Carandang, N. V. — Welch
Centina, Rolando A. — "
Flores, Thomas R. — "
Islam, Shahidul — "
Johnson, Steven H. — Yukon
Khalak, M. U. — Welch
Lee, Joseph — "
Llanto, Alfonso — "
Patel, D. A. — "
Shah, C. C. — "

Mercer

McCluney, Kerry W. — Blacksburg, Va.
Pardasani, G. M. — Princeton
Prescott, Gordon F. — "
Pujari, Bhasker R. — Bluefield

Mingo

de los Reyes, C. M., Jr. — Williamson
Purohit, N. B. — "

Monongalia

Allen, Joel, 5th — Morgantown
Eckert, Marilyn J. — "
Gainer, R. Brooks, II — "
Gardner, Robert J. — "
Griswold, Frank C. — "
Jain, A. C. — "
Jakubec, Paul J. — "
Jewson, Douglas V. — "
Knapp, Richard B. — "
La Plante, E. Schrae — "
Lindholm, Dale D. — "
Morgan, E. J. — "
Shaw, Denman — "
Thompson, Horace B., Jr. — "
Weisser, Roland J., Jr. — "
White, Charles A. — "

Ohio

Agnilar-Heceta, Estherbelle — Wheeling
Campbell, James W. — "
Chvasta, Thomas L. — "
Hofreuter, Virginia D. — "
Jellen, Albert V. — "
Joseph, Robert L. — "
Melia, Jose M. — "
Mendoza, Jose — "
Morris, Joseph T. — "
Mouhlas, Gus J. — "
Park, Young Cha — "
Reyes, Romeo C. — "
Richey, Drake — St. Clairsville, Ohio
Santos, A. T. — Martins Ferry, Ohio
Sohn, S. S. — Wheeling
Van Pelt, Byron L. — "
Vasques, Carlos — "

Parkersburg Academy

Montgomery, J. E. L., Jr. — Vienna
Norris, Joseph P. — Parkersburg

Potomac Valley

Stelling, Herbert P. — Romney

Raleigh

Abraham, Mariamma — Beckley
Al-Yamour, Beverly J. D. — "
Christie, William E., Jr. — "
Dy, Johnny — "

Summers

Shammaa, S. K. — Hinton
Sharma, Chandra P. — "

Tygart's Valley

Abdalla, Fouad H. — Elkins
Behari, Vijay B. — "
Ghannam, M. A. — "
Jain, Nirmal P. — "
Masilamani, Stanley S. — "
Mehta, Virendra S. — Parsons
Magee, James B. — Elkins
Nissley, J. Marlin — Philippi

Auxiliary Completes Program For 51st Annual Meeting

Mrs. Erle E. Wilkinson of Nashville, Tennessee, will be among honor guests when the Woman's Auxiliary to the West Virginia State Medical Association holds its 51st Annual Meeting at The Greenbrier in White Sulphur Springs August 20-23.

Mrs. Erle E. Wilkinson

The meeting again will be held concurrently with the Annual Meeting of the State Medical Association. Mrs. Wilkinson was installed in Atlantic City, New Jersey, in June as the new President of the Woman's Auxiliary to the American Medical Association.

Also addressing the Auxiliary will be Mrs. James H. Manning of Marietta, Georgia, President of the Woman's Auxiliary to the Southern Medical Association.

More than 200 wives of physicians are expected to attend the Auxiliary's business sessions, over which Mrs. William T. Lawson of Fairmont, the State Auxiliary's President, will preside.

Pre-Convention Meetings

An invitation has been extended to all Auxiliary members to attend the first session of the State Medical Association's House of Delegates on Wednesday, August 20, at 2:30 P. M. Dr. Max H. Parrott of Portland, Oregon, President of the American Medical Association, will be the principal speaker.

Mrs. Lawson then will preside at a 4 P. M. pre-convention Auxiliary Board meeting in the Fillmore-Van Buren Rooms.

Opening Convention Exercises

Members of the Auxiliary also have been invited to attend formal opening ceremonies of the State Medical Association's 108th Annual Meeting at 9 A. M. on Thursday, August 21, in Colonial Hall. Congressman Harley O. Staggers of West Virginia will deliver the third annual "Thomas L. Harris Address."

Following the opening exercises, the Auxiliary members will go to the Fillmore-Van Buren Rooms for the formal opening of their convention, with Mrs. Lawson in charge.

First General Session

The keynote address by Mrs. Wilkinson will highlight the initial session at 9:45 A. M. Dr. William E. Gilmore of Charleston, President of the State Medical Association, will be recognized for brief remarks.

Other opening-session items will include the introduction of the convention Co-Chairmen, Mrs. G. T. Evans and Mrs. Harry C. Fleming of Fairmont; reports from officers and committee chairmen, recommendations from the pre-convention Board meeting, election of the 1976 Nominating Committee, and introduction of component Auxiliary Presidents by the Regional Directors.

Bridge, Past Presidents' Breakfast

A bridge tournament beginning at 2:30 P. M. will be held on Thursday in the Trellis Lobby. The Mercer County Auxiliary will serve in a hostess role, with Mrs. L. J. Pace of Princeton as Chairman.

At 8 A. M. on Friday, August 22, the Past Presidents' Breakfast will be held, with Mrs. J. Dennis Kugel of Charleston, Immediate Past President of the State Auxiliary, presiding.

Second General Session

The Second General Session at 9:45 A. M. on Friday in the Fillmore-Van Buren Rooms again will have Mrs. Lawson presiding with a highlight to be the address by Mrs. Manning.

Other activities will include the presentation of the AMA-ERF Awards to the Auxiliary by Dean John E. Jones, M. D., of the West Virginia University School of Medicine, and Mrs. Paul Francke, Jr., of Charleston, State Chairman. Mrs. William J. Reardon of McLean, Virginia, Eastern Regional AMA-ERF Chairman, also will participate.

Mrs. Wilkinson will install Mrs. Robert R. Weiler of Wheeling as the new Auxiliary President. Other officers will be elected after a report from the Nominating Committee, and Mrs. Lawson will receive the Past President's Pin from Mrs. Kugel. Mrs. Weiler will deliver her inaugural address.

Friday Social Functions

The Marion County Auxiliary, with Mrs. Joseph T. Mallamo of Fairmont serving as Chairman, will be hostess for golf on Friday afternoon, and the Raleigh County Auxiliary, with Mrs. Prospero B. Gogo of Beckley as Chairman, will be hostess for tennis, also on Friday afternoon. The Parkersburg Academy will be in the hostess role for the 51st Auxiliary Ball at 10 P. M. in Colonial Hall. Mrs. Robert Sams of Parkersburg will be Chairman for the event. All physicians, their wives and others registered for the State Medical Association convention are invited.

Post-Convention Board Meeting

Mrs. Weiler will preside at the post-convention conference and Board meeting at 10 A. M. on Saturday, August 23, in the Fillmore-Van Buren Rooms.

Mrs. William T. Lawson

Saturday Afternoon Agenda

Auxiliary members are invited to attend the second and final session of the State Medical Association's House of Delegates on Saturday at 2:30 P. M., at which time Dr. Jack Leckie of Huntington will be installed as the Association's President, and other Association officers will be elected.

Other Convention Matters

Those Auxiliary members who plan to participate in bridge, golf and tennis are urged to sign up in advance at the registration desk.

Ob-Gyn Clinical Workshop Planned For Huntington In September

The Fourth Annual Clinical Workshop in Obstetrics and Gynecology, a combined program for physicians and nurses, will be held Friday and Saturday, September 26-27, at the downtown Holiday Inn in Huntington. Sponsors are the West Virginia Obstetrical and Gynecological Society, the West Virginia Section, District IV, American College of Obstetrics and Gynecology, and the West Virginia Section, Nurses Association American College of Obstetrics and Gynecology (NAACOG).

Two nurses postgraduate courses will be held on Friday, September 26, from 8:30 A.M. to 5:30 P.M. There will be Course A—"Assessment of the Newborn," and Course B—"Induction of Labor." The courses grant one Continuing Education Unit (CEU) to nurses and are open to both members and non-members of NAACOG. Enrollment is limited and registrants will be accepted on a first-come basis. The fee for each course is $50 for NAACOG members ($60 for non-members) payable at the time of application, and includes coffee, luncheon and and course materials.

Physicians' sessions will begin at 12:45 P. M. on Friday with welcome and announcements by Gary G. Gilbert, M.D., of Huntington, Program Chairman. The speakers and their topics will include "The Use of $MgSO_4$ in the Treatment of Pre-Eclampsia and Eclampsia"—N. Sehgal, M.D., Charleston Area Medical Center; "Diabetes in Pregnancy"—John Duhring, M.D., University of Kentucky College of Medicine; "Colposcopy and its Application to the Office Practice of Gynecology"—James Austin, M. D., University of Kentucky College of Medicine;

"Fetal Bradycardia After Paracervical Block With Procaine"—Joseph Wright, M. D., CAMC; "Epidural Anesthesia in Obstetrics"—Tom H. Joyce, III, M. D., University of Cincinnati College of Medicine; "Endometriosis: Current Diagnosis and Therapy"—Nicholas Vorys, M. D., Ohio State University College of Medicine.

Business meetings will be held by the West Virginia Obstetrical and Gynecological Society and NAACOG, West Virginia Section, at 5:30 P. M. on Friday, followed by a dinner and dancing. The dinner speaker will be Robert C. Parlett, M. D., Dean of the Marshall University Medical School.

A combined session for physicians and nurses will begin on Saturday with breakfast table conferences from 7:30 to 8:30 A. M. The combined session will continue following breakfast with the following speakers and topics:

"High Risk Pregnancy"—Charles A. White, M. D., West Virginia University School of Medicine; "The Rh Sensitized Patient"—John L. Duhring, M. D.; "Anesthesia in High Risk Pregnancy"—Tom H. Joyce, III, M. D.;

"Monitoring in High Risk Pregnancy"—Steve N. Caritis, M. D., Magee Women's Hospital, Pittsburgh; and "The Neonate in the High Risk Pregnancy"— Paul M. Taylor, M. D., University of Pittsburgh School of Medicine.

The workshop will conclude at 1 P. M.

The workshop has been approved for continuing medical education credit by the American College of Obstetrics and Gynecology, ACOG—NAACOG, and the American Academy of Family Physicians. Credit also has been requested for Category 1 of the Physician's Recognition Award of the American Medical Association, and the West Virginia Nurses Association.

The physician registration fee will be $40. The nurse registration fee (for nurses not attending Course A or B on Friday) will be $20 for NAACOG members, $30 for non-members. The fee includes

the Saturday breakfast conference and the Friday evening cocktail party and dinner dance. Spouse tickets for the dinner dance are $7.50.

For additional information contact one of the Program Coordinators, Gary G. Gilbert, M. D., of Huntington, or Diane Kopcial, R. N., Charleston Area Medical Center.

Dr. Carl B. Hall's Inauguration As AAFP Head In October

Dr. Carl B. Hall of Charleston will be inaugurated as President of the American Academy of Family Physicians during the AAFP's Annual Scientific Assembly, October 6-9, at Chicago's McCormick Place. The inauguration of officers will accompany the conferring of AAFP Fellowship degrees upon 1975 candidates in McCormick Place's Arie Crown Theatre Tuesday night, October 7.

Carl B. Hall, M. D.

Doctor Hall has practiced medicine in Charleston since 1946. He currently is serving as President Elect of the AAFP and formerly was Chairman of the Board of Directors.

The 27th annual meeting provides nine separate program elements with a heavy emphasis on continuing education. Medical lectures will include presentations by 18 nationally-known speakers on topics such as "Caring for a Family's Inherited Disease," "Making Sense Out of Heart Murmur," and "Abdominal Pain in Children."

Highlighting the medical lecture program will be the lead-off speaker, Dr. Otis Bowen, Governor of Indiana and an Academy member. Doctor Bowen's state passed landmark legislation in the area of professional liability in the spring.

Continuing Education Courses this year will include subjects such as interactional analysis, office gynecology, human sexuality, electrolyte problems, and testing techniques for the American Board of Family Practice certification examination.

"Dialogue," a 1974 innovation, will consist of informal discussions involving some 100 physicians, conducted by one or more medical school faculty members. There will be 14 "Dialogue" groups meeting during the four-day Assembly.

Topics covering the gamut of situations confronting today's family doctor will be offered in clinical seminars, two-hour sessions limited to 15 physicians. Live Teaching Demonstrations will be presented on such topics as dermatology, back examinations and self-examinations of the breast by faculty members of medical schools in the Chicago area. Closed-circuit television monitors will provide all in the audience "examining table" closeness.

In other demonstrations, participants will observe techniques to prevent athletic injuries and allow motion or activities after injuries have occurred. Methods of applying casts to simulated broken extremities also will be demonstrated.

Among the seven topics offered in the Programmed Instruction Courses are infant nutrition, gonococcal infections, drug interaction, and alcoholism.

Scientific and technical exhibits will provide a source of information on research projects, new equipment, services and pharmaceuticals.

Physicians will earn one hour of prescribed AAFP continuing education credit for each hour of participation in any element of the scientific program, except for the viewing of exhibits. The Academy requires a minimum of 150 hours of continuing education every three years in order to maintain membership. It was the pioneer in mandatory continuing education and its 150-hour plan now has been copied by other organizations which have established mandatory programs.

Dr. J. W. Stokes, right, who has been practicing medicine for more than 50 years in Hinton, tells Dr. Charles E. Andrews, left, Provost for Health Sciences at the West Virginia University Medical Center, and Dr. William E. Gilmore of Parkersburg, President of the State Medical Association, just what it was like to practice medicine in Summers County in 1925. The occasion was the annual meeting of the West Virginia Public Health Association held in Morgantown in June. Both Doctor Andrews and Doctor Gilmore were principal speakers at the conference at the Towers Conference Center on the university campus. Doctor Stokes was honored by the Southern West Virginia Regional Health Council for his contribution to public health during his carecr. During his 50 years of practice he has delivered 5,000 babies with almost 90 per cent of them being home deliveries.

Dr. John S. Millis Heads National Board Of Medical Examiners

Dr. John S. Millis, Chancellor Emeritus of Case Western Reserve University, has been named Chairman of the National Board of Medical Examiners.

Formed and supported by organizations in the areas of medical practice, licensure and education, NBME prepares, administers and scores a variety of examinations for physicians.

Results of examinations are used by state medical boards for licensure to practice medicine, by medical specialty boards for certification, by schools of medicine for determining student progress and by practicing physicians to measure their continuing progress.

The Board also conducts a research program in educational measurement and competency testing in an effort to improve the quality and effectiveness of its examinations.

Doctor Millis also serves as Chairman of the National Fund for Medical Education, in which he has held several positions since his retirement from CWRU in 1969.

He is currently Chairman of the Study Commission on Pharmacy commissioned by the American Association of Colleges of Pharmacy, and Consultant to the Director of the National Institute of Dental Research.

He is a trustee of CWRU, the American Nurses' Foundation and the Musical Arts Association.

CME 'Medical Playback' Cassette Series Announced By SMA

A new continuing education program for physicians, entitled "Medical Playback," an extensive series of cassette recordings, was announced recently by the Southern Medical Association (SMA).

The cassette program, which includes recordings of all meetings and symposia at the SMA Annual Scientific Meeting in Atlanta last November, is being offered to all 22,000 members of SMA.

In announcing the program, Andrew M. Moore, M. D., of Lexington, Kentucky, President of SMA, said Medical Playback comes as a result of hundreds of requests from physicians who want a permanent record "of the significant scientific sessions at our last meeting."

Doctor Moore said further that the cassette program would also allow physicians unable to attend the meeting to share in the all-inclusive subject matter of the meeting along with the general sessions spotlighting topics of general interest to professionals.

"We believe the vital information of Medical Playback will prove to be a powerful and convenient tool for the practicing physician. We are living in an age where continuing education is a must in order to keep abreast."

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Aug. 15-16—Emergency Medical Services Convention, Charleston.

Aug. 20-23—108th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 20—Diseases of the Peripheral Vascular System (PG Course), Huntington.

Sept. 21-24—Am. Assn. of Electromyography and Electrodiagnosis, Rochester, Minn.

Sept. 21-25—Am. Acad. of Ophth. & Otol., Dallas.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 24-28—Am. Acad. for Cerebral Palsy, New Orleans.

Sept. 25-26—Med. Society of D. C., Washington, D. C.

Sept. 25-27—Am. Heart Assn., W. Va. Affiliate, Morgantown.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Sept. 30-Oct. 3—Am. Roentgen Ray Society, Atlanta.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 23-26—Med. Society of Virginia, Roanoke.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

1976

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 26-29—Am. College of Surgeons, Boston.

June 26-July 1—AMA Annual Meeting, Dallas.

CONVENTION PROGRAM

108th ANNUAL MEETING

of the

West Virginia State Medical Association

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 20-23, 1975

WEDNESDAY MORNING

August 20

(Eastern Daylight Time)

9:00-5:00—Registration, Main Floor Lobby.

10:00—Pre-Convention Meeting of the Council. A. Thomas McCoy, M.D., Presiding (Lee Room, Virginia Wing).

WEDNESDAY AFTERNOON

2:30—First Session of the House of Delegates. William E. Gilmore, M.D., Presiding (Colonial Hall).

Invocation—Carl B. Hall, M.D.

Address: Max H. Parrott, M.D., President, American Medical Association.

Presentation of AMA-ERF Check to the West Virginia University School of Medicine.

Business Meeting.

WEDNESDAY EVENING

6:30-7:30—President's Reception for Honor Guests (Old White Patio).

THURSDAY MORNING

August 21

8:30-5:00—Registration, Main Floor Lobby.

Opening Exercises

(Colonial Hall)

9:00—Call to Order—William E. Gilmore, M.D., President, West Virginia State Medical Association.

Invocation—Joe N. Jarrett, M.D.

Address of Welcome—William E. Gilmore, M.D.

Introduction of Philip M. Sprinkle, M.D., 1975 Program Committee Chairman, and other members of his Committee.

"The Thomas L. Harris Address"

Hon. Harley O. Staggers, Chairman, Interstate and Foreign Commerce Committee, United States House of Representatives.

First General Session

"Symposium on New Concepts in Cancer Diagnosis and Therapy"

(Breast Cancer, Lymphoma, Melanoma)

9:45 - 12:30

Moderator: Raymond B. Weiss, M.D.

Panel Discussants:

Vincent T. DeVita, Jr., M.D., Director, Division of Cancer Treatment of the National Cancer Institute, Bethesda, Maryland.

Paul B. Chretien, M.D., Department of Surgery, National Cancer Institute, Bethesda, Maryland.

Ariel C. Hollinshead, Ph.D., Professor of Medicine at the Laboratory for Virus and Cancer Research, George Washington University School of Medicine, Washington, D. C.

Arvin S. Glicksman, M.D., Chairman of the Department of Radiation Oncology, Rhode Island Hospital, Providence, R. I.

12:30—Recess for Lunch.

12:30—Luncheon Honoring Past Presidents of the West Virginia State Medical Association.

A. Thomas McCoy, M.D., presiding (Tyler Room).

THURSDAY AFTERNOON

2:00—Resolutions Committee—Richard E. Flood, M.D., presiding (West Virginia Room).

THURSDAY EVENING

6:00—Cocktail Party. West Virginia Alumni Association. Clark K. Sleeth, M.D., in charge (West Virginia Room).

FRIDAY MORNING

August 22

Breakfast Meetings

8:00—West Virginia Academy of Ophthalmology and Otolaryngology. Robert E. O'Connor, M.D., presiding (Washington Room, Virginia Wing).

8:00—Section on Internal Medicine. Harold Selinger, M.D., presiding (Lee Room, Virginia Wing).

Panel Discussion: Vincent T. DeVita, Jr., M. D., Bethesda, Maryland; Ariel C. Hollinshead, Ph.D., and James M. Moss, M.D., Washington, D. C.; Thomas G. Skillman, M.D., Columbus, Ohio; and Stanley R. Shane, M.D., Raymond E. Weiss, M.D., and Miss Carolyn Bailey, R.N., Morgantown.

Subject: "Psychological Aspects of the Dying Patient."

8:00—West Virginia Obstetrical and Gynecological Society and Section on Urology. Robert P. Pulliam, M. D.; and A. Thomas McCoy, M.D., presiding (Tyler Room).

Guest Speaker: Charles A. White, M.D., Morgantown. Subject: "Stress Incontinence."

8:00—Section on Neurology, Neurosurgery and Psychiatry. Arthur L. Poffenbarger, M.D., presiding (Pierce Room).

8:00—Section on Orthopedic Surgery. Robert L. Ghiz, M.D., presiding (Jackson Room).

Guest Speaker: Hampar Kelikian, M. D., Emeritus Professor of Orthopedic Surgery, Northwestern University Medical School, Evanston, Illinois. Subject: "Metatarsalgia and Allied Deformities."

8:00—Section on Surgery. S. William Goff, M.D., presiding (Buchanan Room).

Guest Speaker: Paul B. Chretien, M.D., Bethesda, Maryland. Subject: "New Concepts in Surgical Treatment of Melanoma."

8:00—West Virginia Radiological Society. James T. Smith, M.D., presiding (Director's Room).

Guest Speaker: Arvin S. Glicksman, M.D., Providence, Rhode Island. Subject: "Computer Assistance in the Practice of Radiation Oncology."

8:30-5:00—Registration, Main Floor Lobby.

Second General Session

Moderator: Robert P. Pulliam, M.D.

9:30—Russell V. Lucas, Jr., M.D., Professor of Pediatrics, University of Minnesota Medical School. Subject: "Indications for Operative Intervention in Congenital Heart Disease."

10:15—Charles A. White, M.D., Professor and Chairman of the Department of Obstetrics and Gynecology, WVU School of Medicine, Morgantown. Subject: "High Risk Pregnancy."

11:00—Coffee Break.

11:15—Paul B. Chretien, M.D., Bethesda, Maryland. Subject: "Integration of Conventional and Immunotherapy."

12:00—Recess for Lunch.

12:15—Meeting of Cancer Committee. Alvin L. Watne, M.D., presiding (Main Dining Room).

FRIDAY AFTERNOON

2:00—West Virginia Chapter, American Academy of Pediatrics. Barbara Jones, M.D., presiding (Fillmore Room).

Guest Speaker: Russell V. Lucas, Jr., M.D., Minneapolis, Minnesota. Subject: "The Infant with Congenital Heart Disease."

4:00—West Virginia Chapter, American Society of Internal Medicine. John F. Otto, Jr., M.D., presiding (Jackson Room).

4:00—West Virginia District Branch, American Psychiatric Association. Thomas S. Knapp, M.D., presiding (Director's Room).

5:00—Committee on Nominations. Harry S. Weeks, Jr., M.D., presiding (Lee Room, Virginia Wing).

FRIDAY EVENING

6:00—Cocktail Party. The University of Virginia Medical School Foundation. McLemore Birdsong, M.D., James C. Respess, M.D., J. Brookins Taylor, M.D., and William C. Morgan, M.D., in charge (Chesapeake Bay).

6:30—Cocktail Party. West Virginia Chapter, Medical College of Virginia Alumni Association. C. Vincent Townsend, M.D., in charge (Old White Patio).

10:00—51st Ball sponsored by the Woman's Auxiliary. Hostess: Parkersburg Academy Auxiliary—Mrs. Robert Sams, Chairman (Colonial Hall).

SATURDAY MORNING

August 23

9:00-2:00—Registration, Main Floor Lobby.

Third General Session

"Mini-Diabetic Seminar"

Moderator: John W. Traubert, M.D.

9:00—James M. Moss, M.D., Clinical Associate Professor of Medicine, Georgetown University School of Medicine, Washington, D. C. Subject: "Current Therapy for the Ambulatory Diabetic."

9:45—Thomas G. Skillman, M.D., Professor of Medicine, Ohio State University College of Medicine, Columbus. Subject: "Mechanisms of Diabetic Stigmata."

10:30—Coffee Break.

10:45—Stanley R. Shane, M.D., Professor of Medicine, West Virginia University School of Medicine, Morgantown. Subject: "Management of Ketoacidosis."

Family Practice

11:30—John W. Traubert, M.D., Chairman, Department of Family Practice, West Virginia University School of Medicine, Morgantown. Subject: "Family Practice in West Virginia—1975."

12:00—West Virginia Association of Pathologists. Vicente Anido, M.D., presiding (Director's Room).

SATURDAY AFTERNOON

2:30—Second and Final Session of the House of Delegates. William E. Gilmore, M.D., presiding (Colonial Hall).

Invocation—Joseph T. Skaggs, M.D.

Presidential Address: William E. Gilmore, M.D., President, West Virginia State Medical Association.

Presentation of New Officers of Woman's Auxiliary to the West Virginia State Medical Association.

Presentation of Honor Guests.

Business Meeting.

Election of Officers.

Installation of Jack Leckie, M.D., of Huntington, as President of the West Virginia State Medical Association.

SATURDAY EVENING

6:30-7:30—Cocktail Party and Reception Honoring Officers of the West Virginia State Medical Association (Colonial Hall Terrace).

CONVENTION SPEAKERS

Vincent T. DeVita, Jr., M. D.

Bethesda, Md.

Director, Division of Cancer Treatment, National Cancer Institute

Paul B. Chretien, M. D.

Bethesda, Md.

Department of Surgery, National Cancer Institute

Ariel C. Hollinshead, Ph. D.

Washington, D. C.

Professor of Medicine, Laboratory for Virus and Cancer Research, George Washington University School of Medicine

Arvin S. Glicksman, M. D.

Providence, R. I.

Chairman, Department of Radiation Oncology, Rhode Island Hospital

Russell V. Lucas, Jr., M. D.

Minneapolis, Minn.

Professor of Pediatrics, University of Minnesota Medical School

Charles A. White, M. D.

Morgantown, W. Va.

Professor and Chairman, Department of Obstetrics and Gynecology, West Virginia University School of Medicine

James M. Moss, M. D.

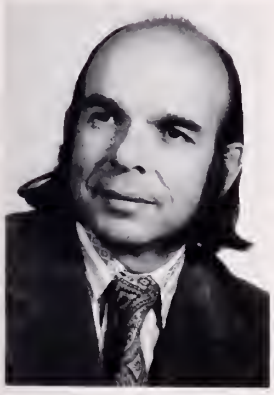
Washington, D. C.

Clinical Associate Professor of Medicine, Georgetown University School of Medicine

Thomas G. Skillman, M. D.

Columbus, Ohio

Professor of Medicine, Ohio State University College of Medicine



Stanley R. Shane, M. D.

Morgantown, W. Va.

Professor of Medicine, West Virginia University School of Medicine

John W. Traubert, M. D.

Morgantown, W. Va.

Chairman, Department of Family Practice, West Virginia University School of Medicine

A WORD OF THANKS

The 1975 Program Committee, and the officers and members of the West Virginia State Medical Association, wish to acknowledge with sincere thanks grants received from the following Firms to help support the Scientific Program for this year's 108th Annual Meeting:

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1975 PROGRAM COMMITTEE

Philip M. Sprinkle
Morgantown
Chairman

R. J. Bailey
Parkersburg

Fernando G. Giustini
Wheeling

Robert D. Hess
Bridgeport

Joseph T. Skaggs
Charleston

Jack Leckie
Huntington

DELEGATES AND ALTERNATES

BOONE (2)—Delegates, David E. Wallace and Harold H. Howell, Madison. Alternates, A. E. Glover, Madison; and W. V. Wilkerson, Whitesville.

BROOKE (2)—James E. Wise and Rogelio L. Velarde, Follansbee. Alternate, Ralph McGraw, Follansbee.

CABELL (10)—Delegates, Jack Leckie, A. C. Esposito, Dennis S. O'Connor, Lyle B. McGinnis, John F. Otto, Jr., Winfield C. John, Thomas F. Scott, Florence K. Hoback, Gilbert A. Ratcliff, Jr., and William J. Echols, Huntington. Alternates, W. L. Neal, Joseph E. Ricketts, Sirous Arya and Charles E. Turner, Huntington; W. W. Mills and H. S. Mullens, Kenova; and Roy A. Edwards, Jr., Huntington.

CENTRAL WEST VIRGINIA (3)—Delegates, Joseph B. Reed, Buckhannon; Louis W. Groves, Jr., and Clemente Diaz, Richwood. Alternates, C. R. Davisson, Weston; R. L. Chamberlain and I. Frank Hartman, II, Buckhannon.

EASTERN PANHANDLE (5)—Delegates, L. Walter Fix, Curtis G. Power, Jr., C. Vincent Townsend, N. B. Groves and Harry B. Scott, Martinsburg. Alternates, William R. McCune, Harvey D. Reisenweber and Norman Samuels, Martinsburg.

FAYETTE (3)—Delegates, Carl R. Adkins, Fayetteville; and Joe N. Jarrett and W. P. Bittinger, Oak Hill.

GREENBRIER VALLEY (3)—Delegates, Thomas O. Dotson and Herbert L. Pope, White Sulphur Springs; and Harold P. Dinsmore, Ronceverte. Alternate, Lee B. Todd, Quinwood.

HANCOCK (3)—Delegates, Richard E. Flood, George S. Kosar and Ray S. Greco, Weirton. Alternates, George Naymick, Carlos L. Vasquez and Reynaldo B. Vista, Weirton.

HARRISON (5)—Delegates, Cordell A. de la Pena, Clarksburg; Julian D. Gasataya and Robert D. Hess, Bridgeport; and Catalino B. Mendoza, Jr., Clarksburg. Alternates, Erlinda L. de la Pena and Charles S. Harrison, Clarksburg; Mehmet V. Kalaycioglu, Shinnston; and George W. Easley, Clarksburg.

KANAWHA (17)—Delegates, George V. Hamrick, Sherman E. Hatfield, Thomas J. Janicki, Seigle W. Parks and G. A. Shawkey, Charleston; Richard C. Rashid, South Charleston; Joseph A. Smith, Dunbar; Pat A. Tuckwiller and Carrel M. Caudill, Charleston; Donald E. Cunningham, St. Albans; and W. Alva Deardorff, Robert L. Ghiz, Carl B. Hall, John M. Hartman, Jimmie L. Mangus, John B. Markey and Joseph T. Skaggs, Charleston. Alternates, Arthur A. Abplanalp, Charleston; Enrique Aguilar, Montgomery; R. S. Birckhead, Gauley Bridge; Marshall J. Carper, South Charleston; Jacques Charbonniez, Charleston; Ralph J. Holloway, South Charleston; John A. B. Holt, Charleston; James T. Hughes, Ripley; Thomas S. Knapp, J. Dennis Kugel, Charleston; John V. Merrifield, Dunbar; and Robert E. O'Connor, Carl J. Roncaglione, Harold Selinger, Jose M. Serrato and John F. I. Zeedick, Charleston.

LOGAN (3)—Delegates, Jorge J. San Pedro and Thomas P. Long, Man; and Ray M. Kessel, Logan. Alternate, C. J. Lesaca, Man.

MARION (4)—Delegates, William T. Lawson and E. G. Cadogan, Fairmont. Alternates, T. F. Hall, II, and Joseph D. Romino, Fairmont.

MARSHALL (3)—Delegates, Kenneth J. Allen, Glen Dale; David L. Ealy, Moundsville; and E. Y. Baysal, Glen Dale. Alternate, William Paul Bradford, Moundsville.

MASON (2)—Delegates, Aarom Boonsue, Pt. Pleasant. Alternate, Marianito R. Montero, Lakin.

McDOWELL (3)—Delegates, D. Castrodale, Ray E. Burger and Arthur Allen Carr, Welch. Alternates, M. Kuppusami, Romulo Miranda and Stephen Mamick, Welch.

MERCER (5)—Delegates, John J. Mahood, Bluefield; Frank J. Holroyd, Princeton; Upshur Higginbotham, Bluefield; L. J. Pace, Princeton; and Sam Milchin, Bluefield, Virginia. Alternates, David F. Bell, Jr., Henry F. Warden, Jr., J. E. Blaydes, Jr., and Richard O. Rogers, Jr., Bluefield.

MINGO (2)—Delegates, Arthur E. Levy and Robert J. Tchou, Williamson. Alternates, Duane A. Schram and Frank J. Burian, Williamson.

MONONGALIA (6)—Delegates, Charles E. Andrews, George A. Curry, Robert L. Smith, W. Gene Klingberg and Roy James Stevens, Morgantown. Alternates, John L. Fullmer, Lawrence S. Miller, Philip M. Sprinkle, Joseph J. Renn, III, and Ludwig Gutmann, Morgantown.

OHIO (8)—Delegates, J. N. Aceto, W. E. McNamara, Robert J. Reed, III, M. D. Reiter, Thomas L. Thomas, Stephen D. Ward, Harry S. Weeks, Jr., and Robert R. Weiler, Wheeling. Alternates, Camilla K. Bauer, W. E. Ackermann, Alfred D. Ghaphery, Fernando G. Giustini, John P. Griffith, Jr., Donald H. Hofreuter, John W. Kennard and Jess S. Renedo, Wheeling.

PARKERSBURG ACADEMY (7)—Delegates, R. C. Cowan, Jr., Lyle D. Vincent, Frederick D. Gillespie, S. William Goff, Athey R. Lutz and F. Lloyd Blair, Parkersburg; and H. George Bateman, Williamstown.

POTOMAC VALLEY (3)—Delegates, Esteban Friera, Romney; Dewey F. Bensenhaver, Petersburg; and Harry F. Coffman, Keyser. Alternates, Howard

J. Maxwell, Petersburg; Charles J. Sites, Franklin; and Lysle T. Veach, Petersburg.

PRESTON (2)—Delegates, Donald P. Brown, Kingwood; and Jerome C. Arnett, Rowlesburg. Alternates, Del Roy R. Davis, Kingwood; and William H. Harriman, Jr., Terra Alta.

RALEIGH (7)—Delegates, William D. McLean, Beckley; Eugene Warvariv, Daniels; James A. Barnes, Nicholas D. Zambos, Roy James Yates, Prospero B. Gogo and Stephen T. J. Lee, Beckley. Alternates, Everett B. Wray, Walter E. Klingensmith, F. Vivan Lilly, Joseph A. Maiolo, Richard G. Starr, Worthy W. McKinney and John M. Daniel, Beckley.

SUMMERS (2)—Delegates, Buford W. McNeer and Jack D. Woodrum, Hinton. Alternates, E. L. Jimenez and C. P. Sharma, Hinton.

TYGART'S VALLEY (4)—Delegates, T. H. Chang, Philippi; H. L. Jellinek, Elkins; and A. Kyle Bush, Philippi. Alternates, L. H. Nefflen and A. C. Thompson, Elkins; and B. G. Thimmappa, Philippi.

WETZEL (2)—Delegates, Terrell Coffield, New Martinsville; and Allen M. Dyer, Jr., Pine Grove. Alternates, Charles P. Watson and Lemoyne Coffield, New Martinsville.

WYOMING (2)—Delegates, Frank J. Zsoldos and George F. Fordham, Mullens. Alternates, Ross E. Newman, Mullens; and Jose Floresca, Beckley.

Reception Committee

KENNETH G. MACDONALD, *Chairman*

C. A. Hoffman
Frank J. Holroyd
Richard E. Flood
George R. Callender, Jr.
Harry S. Weeks, Jr.

William E. Gilmore
Philip M. Sprinkle
Carl B. Hall
Hawey A. Wells, Jr.
Joseph T. Skaggs

John M. Daniel
R. U. Drinkard
Lyle D. Vincent
Alvin L. Watne
Walter E. Kingensmith

Vernon E. Duckwall
Harold N. Kagan
Robert D. Hess
Joe N. Jarrett
Charles E. Andrews

Andrew W. Goodwin, II
W. Alva Deardorff
Arthur E. Levy
Barbara Jones
Herbert H. Pomerance

George A. Shawkey
W. Gene Klingberg
M. Bruce Martin
Robert P. Pulliam
T. Keith Edwards

Fernando G. Giustini
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John F. Otto, Jr.

Harold Selinger
Pat A. Tuckwiller
Winfield C. John
Clark K. Sleeth
Richard V. Lynch, Jr.

Robert M. Biddle
J. L. Mangus
L. Dale Simmons
Ray M. Kessel
John J. Brandabur

Robert L. Ghiz
Robert R. Weiler
Thomas F. Scott
Robert W. Lowe
J. Hugh Wiley

Jack Leckie
J. C. Huffman
Albert C. Esposito
George A. Curry
Seigle W. Parks

George F. Evans
John J. Mahood
L. J. Pace
Athey R. Lutz
Worthy W. McKinney

Official Program
WOMAN'S AUXILIARY
to the
West Virginia State Medical Association
51st Annual Meeting
THE GREENBRIER
White Sulphur Springs
August 20-23, 1975

WEDNESDAY AFTERNOON
August 20

2:30—First Session of the House of Delegates, State Medical Association (Colonial Hall).

Address by Dr. Max H. Parrott, President, American Medical Association.

4:00—Pre-Convention Board Meeting, Mrs. William T. Lawson, President, presiding (Fillmore-Van Buren Rooms).

WEDNESDAY EVENING

6:30-7:30—President's Reception for Honor Guests (Old White Patio).

THURSDAY MORNING
August 21

9:00—Formal Opening of the 108th Annual Meeting of the West Virginia State Medical Association (Colonial Hall).

"The Thomas L. Harris Address"

Hon. Harley O. Staggers, Chairman, Interstate and Foreign Commerce Committee, U. S. House of Representatives.

(Auxiliary Members are Invited to Attend).

9:45—Formal Opening of the Convention, Mrs. William T. Lawson, President, presiding (Fillmore-Van Buren Rooms).

Invocation—Mrs. Hu C. Myers.

Pledge of Loyalty—Mrs. Hu C. Myers.

Introduction of Honor Guests.

Presentation of William E. Gilmore, M.D., President, West Virginia State Medical Association.

Introduction of Convention Co-Chairmen—Mrs. G. T. Evans and Mrs. Harry C. Fleming.

Roll Call of Delegates—Mrs. Kenneth D. Bailey.

Convention Rules of Order—Mrs. Rupert W. Powell.

Treasurer's Report—Mrs. Louis W. Groves.

In Memoriam—Mrs. John D. H. Wilson.

Credentials and Registration—Mrs. David Z. Morgan.

Keynote Address—Mrs. Erle E. Wilkinson, President, Woman's Auxiliary to the American Medical Association.

Recommendations from Pre-Convention Board Meeting—Mrs. William T. Lawson.

New Business and Announcements.

Report of the Nominating Committee, First Reading—Mrs. J. Dennis Kugel.

Election of 1976 Nominating Committee.

Reports of Officers and Standing Committee Chairmen (These reports will not be read, but are published in the Annual Reports Book).

Presentation of Regional Directors:

Eastern Region—Mrs. E. G. Friera.

Northern Region—Mrs. Robert J. Reed, III.

Western Region—Mrs. D. Sheffer Clark.

Southern Region—Mrs. R. James Yates.

Recess.

THURSDAY AFTERNOON

2:30—Bridge (Trellis Lobby). Hostess, Mercer County, Mrs. L. J. Pace, Chairman.

FRIDAY MORNING
August 22

8:00—Past President's Breakfast, Mrs. J. Dennis Kugel, Immediate Past President, presiding (Virginia Room).

9:45—Second General Session—Mrs. William T. Lawson, President, presiding (Filmore-Van Buren Rooms).

Introduction of Honor Guests.

Roll Call of Delegates—Mrs. Kenneth D. Bailey.

Report of Reading Committee.

Reports of Convention Committees:

Finance—Mrs. Charles E. Andrews.

Credentials and Registration—Mrs. David Z. Morgan.

Press and Publicity—Mrs. John E. McKenzie.

Presentation of AMA-ERF Awards.

Dr. John E. Jones, Dean of West Virginia University School of Medicine; Mrs. Paul Francke, Jr., State Chairman; and Mrs. William J. Reardon, Eastern Regional AMA-ERF Chairman.

Address—Mrs. James H. Manning, President, Woman's Auxiliary to the Southern Medical Association.

Unfinished Business.

Report of 1975 Nominating Committee, Second Reading—Mrs. J. Dennis Kugel.

Election of Officers.

Installation of Officers—Mrs. Erle E. Wilkinson, President, Woman's Auxiliary to the American Medical Association.

Presentation of President's Pin and Gavel—Mrs. William T. Lawson.

Presentation of Past President's Pin—Mrs. J. Dennis Kugel.

Inaugural Address—Mrs. Robert R. Weiler.

Announcements

Adjournment.

FRIDAY AFTERNOON

2:00—Golf Tournament—Hostess, Marion County, Mrs. Joseph T. Mallamo, Chairman.

Tennis Tournament—Hostess, Raleigh County, Mrs. Prospero B. Gogo, Chairman.

FRIDAY EVENING

10:00—51st Ball—Hostess, Parkersburg Academy, Mrs. Robert Sams, Chairman (Colonial Hall).

SATURDAY MORNING

August 23

10:00—Post-Convention Conference and Board Meetings—Mrs. Robert R. Weiler, President, presiding (Fillmore-Van Buren Rooms).

SATURDAY AFTERNOON

2:30—Second and Final Session of the House of Delegates of the State Medical Association (Colonial Hall).

Presidential Address—William E. Gilmore, M.D.

Installation of Jack Leckie, M.D., as 1975-76 President of the West Virginia State Medical Association.

(Auxiliary Members are Invited to Attend).

SATURDAY EVENING

6:30-7:30—Cocktail Party and Reception Honoring the Officers of the West Virginia State Medical Association (Colonial Hall Terrace).

SCIENTIFIC EXHIBITS

AMERICAN CANCER SOCIETY
West Virginia Division, Inc.

"CONTROL OF CANCER OF THE COLON AND RECTUM." The exhibit points out the plateau reached in the control of colon and rectum cancer, and emphasizes the need for earlier diagnosis in order to reduce mortality from this disease. The importance of digital rectal examination, routine proctosigmoidoscopy, and occult blood testing is stressed. Studies are cited showing reduced mortality rates through routine proctosigmoidoscopy and occult blood testing. A diagnostic guide for the asymptomatic patient is presented.

Patricia F. Haye, Program Director.

BLUE CROSS HOSPITAL SERVICE, INC. AND BLUE SHIELD OF SOUTHERN W. VA., INC.

"PLAN UTILIZATION REVIEW." The exhibit will feature manuals and visual displays relative to the Plans' utilization review activities.

C. Judson Pearson, President; L. G. Bowling, III, Director, Utilization Review; and James Harlan, Director, Provider Relations.

THE MYERS CLINIC—BROADDUS HOSPITAL

"POST-OPERATIVE JAUNDICE." An overview of post-operative jaundice and case presentation.

A. Kyle Bush, M. D., Chief of Surgery, and J. Richard Crawford.

NATIONWIDE INSURANCE COMPANY

"MEDICARE INFORMATION." You are invited to stop by the Nationwide-Medicare exhibit to receive the latest Medicare information and visit with our Medicare service representatives. Complimentary Currier & Ives reprints will be available, as usual.

Hugh F. Hughes, Field Operations Manager; C. R. (Bob) Wink, Field Services Manager; Don F. Harper, District Medicare Manager, and Mrs. Betty Rickenbacker, Claims Service Supervisor.

SOUTHERN MEDICAL ASSOCIATION

"TOLL-FREE CANCER EDUCATION SERVICE."

Roy B. Evans, Jr., Assistant Executive Director.

U. S. SOCIAL SECURITY ADMINISTRATION
District Office, Covington, Virginia

"SOCIAL SECURITY INFORMATION." A panel exhibit will cover retirement, disability, Medicare and supplemental security income. Pamphlets will be distributed.

James H. Swaim, Field Representative, and Ruth Moon, Operations Analyst.

WEST VIRGINIA STATE DEPARTMENT OF HEALTH
Venereal Disease Control Bureau

"VENEREAL DISEASE." The exhibit emphasizes the need for practicing physicians to maintain a current venereal disease up-date. The display provides appropriate elements to assist the physician in accomplishing this purpose. It also features a first for the West Virginia medical community that you will not want to miss. See you there!

Ronald G. Bryant, Director of Venereal Disease Control, and Tom Nuzum and Clair Boso, Venereal Disease Representatives.

WEST VIRGINIA STATE DEPARTMENT OF HEALTH
Division of Vital Statistics

"HEALTH STATISTICS IN WEST VIRGINIA—A CONGLOMERATE." The display will depict various types of vital statistics, growth rates and health care changes. The new West Virginia Health Manpower Statistical System also will be pictorially introduced, with an explanation of its purpose and aims.

Joseph D. Carney, Division of Vital Statistics; Jim Ruckman, Administrative Assistant, and Carolyn Tierney, Secretary.

WEST VIRGINIA AFFILIATE, AMERICAN HEART ASSOCIATION

"PENICILLIN EXHIBIT." The exhibit will explain the low-cost penicillin program sponsored by the Heart Association and the implications of rheumatic fever. Educational materials will be available.

Charles E. Sikorski, Executive Director.

WEST VIRGINIA LUNG ASSOCIATION

"EDUCATIONAL INFORMATION ON LUNG DISEASE." An educational exhibit for physicians with patients having lung disease.

Carl C. Booberg, Executive Director, and Melvin H. Lively, Program Director.

WEST VIRGINIA DEPARTMENT OF MENTAL HEALTH

"SERVICES." Mental Health laws and program brochures will be available. The backdrop of the exhibit will be a map of West Virginia showing the various mental health-mental retardation facilities.

Blaine P. Dowler, Coordinator, Division of Mental Health Education; Wayne F. Dawson, Education Consultant, and David H. Shortt, Information Representative.

WEST VIRGINIA DEPARTMENT OF WELFARE

"WEST VIRGINIA MEDICAID MANAGEMENT INFORMATION SYSTEM." The West Virginia Department of Welfare is in the process of installing the most advanced Medicaid Management Information System (MMIS) in the nation. This system, when fully operational, will provide West Virginia citizens with the most responsive Medicaid administrative operation. A brief slide presentation will show the processes which a Medicaid claim goes through when received in the Department. The exhibit will display examples of the new physician billing form and the new remittance statement, which will be provided by MMIS. The major benefits will be the increased capability of the Department to respond to inquiries concerning claim status.

Francis J. Melly, Project Director, and Arthur R. Carroll, Project Manager.

WEST VIRGINIA REGIONAL MEDICAL PROGRAM

The display will feature a slide presentation of the major items addressed by the National Health Planning and Resource Development Act of 1974 (PL-93-641).

Charles D. Holland, Director, and Warren H. Moss, Project Specialist.

STATE COMPREHENSIVE HEALTH PLANNING AGENCY

The exhibit will offer materials and information about the 1975 West Virginia Comprehensive Health Plan and Planning for Improved Emergency Medical Services. Staff members will be at the exhibit at all times to answer questions and receive comments.

Harry A. Stansbury, Jr., Ph. D., Director; and Alfred Broadhead, Health Planner.

THE WEST VIRGINIA MEDICAL INSTITUTE, INC.

Present and developing medical education, professional review and related activities of the Institute will be depicted and explained by this exhibit and personnel manning it.

Harry S. Weeks, Jr., M. D., President, and Mrs. Betty Kirkwood, Acting Executive Director.

ANNUAL REPORTS

Cancer Committee

A meeting of the Cancer Committee was held at The Greenbrier on August 23, 1974, during the 107th Anual Meeting of the West Virginia State Medical Association.

In addition to your Chairman, other members of the Committee present included Drs. John W. Trenton of Kingwood, Chauncey B. Wright of Huntington and David B. Gray of Charleston.

Guests at the meeting included Dr. N. H. Dyer, Director of the State Department of Health; Dr. Thomas J. Janicki of Charleston, Dr. Eldon B. Tucker of Morgantown, Mrs. Patricia F. Haye of Charleston, Program Director, American Cancer Society, West Virginia Division, and the Division's Executive Vice President, Mr. Bob Bradford; Dr. William L. Cooke, Director of the Disease Control Division of the State Department of Health; and Dr. Frank J. Jarsen of Charles Town.

Drs. Dyer and Cooke reported on the activities of the Cancer Control Division. The discussion centered around the value of the Central Cancer Registry, the data from which is incomplete due to inconsistent reporting from the participating hospital registries. The consensus was that the Tumor Registries were valuable for cancer programs and care of the cancer patient. On a motion by Doctor Gray, it was recommended that only hospitals with cancer registries approved by the Division of Cancer Control be approved for aid from the Division of Cancer Control. The motion was seconded by Doctor Wright and approved unanimously.

Mr. Bradford reported on the programs of the West Virginia Division of the American Cancer Society. The society now has nine Mark IV projectors available with teaching casettes for professional education in hospitals throughout the State. The Reach for Recovery Program and the Ostomy Programs are developing throughout the State so that more cancer patients are being aided by these rehabilitation programs. The Division supported the training of the State's first ostomy therapist working in the Charleston hospitals. Funds are available for the training of a second therapist.

Doctor Janicki reported on the continuing support of Vocational Rehabilitation for the cured cancer patient, including training in esophageal speech.

Doctor Tucker reported on the new TRIP program. This program envisioned by Dr. Tucker and the State Medical Association provides financial support for transportation for elderly and needy patients. These transportation tickets will be very valuable for cancer patients returning to their physician for follow-up visits and outpatient therapy.

Doctor Watne reported that the USPHS Cancer Training Grant has been continued at the University, and that the Tumor Conference Telelecture will continue as scheduled at 4 P. M., Tuesday afternoons. Dr. Kenneth Holwitt is the American Cancer Society Clinical Fellow, and Dr. Leonard Peters was awarded the American Cancer Society Faculty Fellowship.

Respectfully submitted,

Alvin L. Watne, M.D.
Chairman

June 18, 1975

Insurance Committee

Your Group Insurance Committee report this year includes in addition to our regular report on the state of the Association's Group Insurance Program, a special section on professional liability. The problem countrywide with professional liability is a well publicized fact . . . including the "drying up" of markets, prohibitive premiums, and spiraling claims. While our situation in West Virginia is by no means solved, we do have a viable market and a contractual agreement with the Aetna Casualty and Surety Company to provide professional liability insurance for the next two-and-one-half years. We also have in operation a program designed to acquaint members with the various aspects of the program and suggestions for reduction in losses. A program is also underway for remedial legislation.

Your Group Insurance Committee has three primary responsibilities for the operation and performance of the Association Group Insurance Program. First, to provide a portfolio of plans that respond to membership needs. Second, prompt, efficient service in the administration of the Program. Third, the updating of plans to today's needs. Meeting these responsibilities is reflected in the Program and Service here outlined.

Program

Outlined below is the portfolio of plans now available to members. Each responds to a vital, personal need. Each offers the flexibility required to tailor protection to individual requirements. The Program includes nine plans:

1. MONTHLY INCOME PROTECTION
   This plan offers up to $2,000 a month. Benefits are paid for as long as disability lasts—up to lifetime for accident and up to age 70 for sickness.

2. OFFICE OVERHEAD EXPENSE
   This plan offers up to $3,500 a month and pays the regular operating cost of your office . . . including employees' salaries, rent, utilities, and other normal expenses. Premiums for this coverage are tax deductible.

3. FAMILY MAJOR HOSPITAL INSURANCE
   This plan provides $15,000 of coverage. In addition to the named insured, it also includes the insured's spouse and dependent children. The plan pays 80 per cent of hospital expenses and licensed nursing service.

4. LIFE INSURANCE
   This plan offers up to $50,000 in units of $10,000 each. Optionally, coverage is available on spouse and children in lesser amounts.

5. ACCIDENTAL DEATH AND DISMEMBERMENT
   This policy pays up to $100,000 for Accidental Death and Dismemberment. Coverage is provided 24 hours a day . . . at home or away . . . on or off the job . . . worldwide.

6. HOSPITAL MONEY PLAN
   This plan offers a schedule of benefits up to $100 a day for each day of hospitalization for a member and spouse. Dependent children may be insured up to $50 a day. This plan is designed to provide the "over and above" expenses that inevitably attend today's hospital confinement.

7. COORDINATED INVESTMENT SERVICE
   Specifically designed for HR-10, this plan offers mutual funds, fixed or variable annuities, and split funds.

8. MILLION DOLLAR EXCESS LIABILITY
   Million Dollar Excess Liability . . . over regular liability policies including professional liability, automobile, home, and personal activities.

9. GROUP PROFESSIONAL LIABILITY INSURANCE
   Professional Malpractice package plan including million dollar excess coverage.

Service

Administration of the Program is designed for efficient performance and responsive service.

Specifically, all accounting procedures, including billing and collecting, are computerized. The process is under constant surveillance for accuracy and sound performance.

A personalized portfolio provides each member with a complete file of all plans available.

An annual "Computer Audit" is furnished each member showing the coverages and premium for protection now in force and in addition, a list of coverages for which he may apply. A return card enables him to request information on plans in which he may be interested.

A service representative travels the State and is always on call for consultation and assistance in filing claims or enrollment in the Program.

As new members come into the Association, a letter describing the Group Insurance Program is sent to him with an invitation to participate. A return card enables him to request information on any plan that interests him.

Responding To Today's Needs

The spiral of inflation and increase in cost of living has necessitated an upward revision in the amounts of the plans offered.

To this end, benefits under the disability income plan have been increased from $1,500 a month to $2,000 a month. A substantial percentage of the membership have increased their monthly income to the new higher limit.

The Office Overhead Plan has been increased from $2,000 a month to $3,500 a month.

The Hospital Money Plan has been increased from $40 per day to $100 per day.

Summary

The Program is designed to respond to members' needs for adequate protection. Administration is based on prompt, efficient "on-the-ground" service. The Program is constantly updated to comply with today's needs.

A Special Report From Aetna On The Professional Liability Insurance Program

Since December 1, 1972, the West Virginia State Medical Association has enjoyed a unique position. It is one of only eight state medical societies that have a working program with the Aetna Life and Casualty Company for the coverage of member physicians' professional liability insurance. The Aetna has made a commitment to provide this coverage until December 31, 1977. Although the rates are reviewed each year, the program has provided a measure of stability to an otherwise troubled sea.

We need only to look at some of our sister states to see what problems that physicians and other medical providers are faced with. While it is too early to speculate as to what will happen to the program on January 1, 1978, if the current trends continue there is good reason to conclude that Aetna will renew the program for another three to five years.

One of the features of the program with the Aetna is a Liability Loss Control and Education Program. After a rather slow start, the program has started to pick up momentum, and the first District Claim Review Panel convened on June 4, 1975, in Fairmont. Dr. Justus C. Pickett of Morgantown will serve as Chairman of District No. 2. It is expected that this panel, as well as those panels being formed, will have a beneficial effect on frequency and severity trends of claims under the program. It is anticipated that four of the seven district panels will be in operation by January 1, 1976.

Respectfully submitted,

Charles A. Hoffman, M. D.
Chairman

James A. Barnes, M. D.
John T. Chambers, M. D.
R. U. Drinkard, M. D.
A. C. Esposito, M. D.
L. Walter Fix, M. D.
F. Perry Greene, Jr., M. D.
Upshur Higginbotham, M. D.
Logan W. Hovis, M. D.
Kenneth G. MacDonald, M. D.
Buford W. McNeer, M. D.
J. C. Pickett, M. D.
C. Vincent Townsend, M. D.

July 9, 1975

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AIR FORCE. Health Care At Its Best.

WVU Medical Center
—News—

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

Dr. N. LeRoy Lapp, Associate Professor in the Division of Pulmonary Medicine at West Virginia University School of Medicine, was invited by the Director General of the European Economic Communities to attend the annual scientific sessions on "Chronic Respiratory Diseases-Industrial Medicine" July 1 to 3 in Luxembourg.

Doctor Lapp was to participate in the sessions as an expert guest discussant since, as a representative of a non-member country, he would not be presenting a formal paper.

The invitation is a result of Doctor Lapp's September to December, 1974, exchange visit to the Unite-14, Institut National de la Sante et de la Recherche Medicale (INSERM), in Nancy, France.

Before attending the EEC sessions, Doctor Lapp was to visit for several days at U-14, INSERM, where he was to present a talk entitled "Le Volume de Fermeture Chez Les Ouvriers Textiles" (Closing Volume Among Textile Workers), and consult with former research associates concerning respiratory physiological studies.

Dr. Cricco Awarded SMA Research Grant

Robert P. Cricco, M. D., of the Department of Urology at the West Virginia University School of Medicine, has been awarded a research project grant by the Southern Medical Association (SMA).

The 22,000-member physician group annually supports medical research by awarding grants to initiate projects or continue relatively new studies.

Doctor Cricco is one of 29 researchers selected from more than 100 applicants to receive an SMA research grant this year. The grant will help to fund Doctor Cricco's project, Estrogen and Androgen Receptors in Normal and Hyperplastic Canine Prostatic Glands.

The Research Project Fund, established in 1969, is one of several SMA programs that support the organization's exclusive purpose of developing and fostering scientific medicine.

Ten Faculty, Staff Retire

Among the 49 West Virginia University faculty and staff members retiring during the past fiscal year were 10 associated with the Medical Center whose service contributed 134 years to the group's total of 889 years of service.

The 10, their positions and years of service are:

Thomas O. Brinegar, Physical Plant, 28 years; Jessie Davis, University Hospital nurse's aide messenger, 8 years; Richard Hall, Physical Plant, 16 years; Dr. David S. Jones, Professor of Anatomy and Surgery, 9 years; Dorothy Keilbach, University Hospital food service worker, 12 years; Dr. Peter P. Ladewig, Clinical Associate Professor of Pathology at the Medical Center's Charleston Division, 9 years; Beryl McBee, LPN at University Hospital, 14 years; Mary Mundell, University Hospital food service worker, 15 years; Paul Shine, Physical Plant, 15 years, and Dr. Isaiah A. Wiles, Clinical Associate Professor of Medicine, 8 years.

A banquet in June at the Mountainlair Gold Ballroom honored the entire group.

34 House Officers Training At CAMC

Thirty-four new house officers began their training July 1 in the program of West Virginia University Medical Center's Charleston Division at Charleston Area Medical Center.

Of the 34 newcomers, 25 are United States citizens.

Four of these have joined the program in family practice—now in its second year—based at Herbert J. Thomas Memorial Hospital.

Included in the 72-member house staff total at all levels of training in the WVU/CAMC program are 43 alumni of WVU School of Medicine.

Recipient of a $1,000 undergraduate scholarship to study maxillo-facial plastic surgery at the University of Zurich in Switzerland this summer was Raymond F. Morgan (right), of Pittsburgh, a fourth-year student at West Virginia University School of Medicine. Dr. Albert C. Esposito of Huntington, Regent for West Virginia for the International College of Surgeons, announced the selection of Morgan for the ICS award. Making the presentation earlier this summer were (from left) Dean John E. Jones and Dr. David Z. Morgan, Associate Dean, of WVU School of Medicine.

WEST VIRGINIA MEDICAL ASSOCIATION
OFFERS YOU AND YOUR FAMILY

AMERICAN MEDICAL ASSOCIATION
29th CLINICAL CONVENTION
Honolulu, Hawaii

Departing Charleston, W. Va. Friday, November 28
Departing Honolulu Saturday, December 06

9 days HAWAII

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- PEARL HARBOUR CRUISE INCLUDING TRANSFERS
- 8 NIGHTS WAIKIKI SURF HOTEL IN HONOLULU
- GRATUITIES TO HOTEL BELLHOPS ON ARRIVAL AND DEPARTURE
- ROUNDTRIP COACH AIR FROM CHARLESTON
- TAX AND SERVICE

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$368 THIRD PERSON IN ROOM

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The Month in Washington

THE unusual one-day "public oversight" hearings of the House Ways and Means Committee's Health Subcommittee to determine if the Department of Health, Education and Welfare is superseding Congressional intent in an increasing number of Medicare cost-control regulations was marked throughout by angry confrontation between the HEW Secretary and health providers.

Undaunted by a solid array of heated opposition from medical and hospital groups, Secretary Caspar Weinberger told the Subcommittee that the four disputed Medicare regulations will save about $250 million a year and "improve the quality of care."

The hearing bringing together Weinberger and his critics was called by Subcommittee Chairman Dan Rostenkowski (D-Ill.) who said he was sorry the confrontation had to take place. "I hope the Subcommittee can remove roadblocks. We should really try to get the government and the health care industry out of the courtroom and into the conference room where the debate belongs."

Four lawsuits have been filed against the HEW Department to overturn the regulations. Members of hospital and physicians' groups, including the American Medical Association, urged the lawmakers at the hearing to crack down on HEW for going beyond the intent of law. But there was little indication from the Subcommittee that any swift action is contemplated.

Weinberger, easily fielding most of the Subcommittee's questions, refused to acknowledge any merit in the private sector's slashing attacks on the regulations, insisting the regulations followed the intent of Congress and were needed to curb costs. He suggested the remedy would be in seeking to have Congress change the laws, rather than in suing HEW.

The regulations under fire:

—Social Security's Utilization Review (UR) final regulations requiring elaborate institutional post admission review mechanisms.

—Reducing the schedule of limits on hospital inpatient general routine service costs from the 90th to the 80th percentile.

—Limitation on recognition of physicians' prevailing charge increases, based on an economic index.

—Termination of the inpatient routine nursing salary cost differential.

• **From the Washington Office of the American Medical Association.**

Stressing a common theme among the witnesses, the AMA cited "a general feeling of fultility concerning administrative action felt by the public as a whole, but especially by groups subject to and particularly affected by federal regulation." Ernest T. Livingstone, M. D., Chairman of the AMA Council on Legislation, said many professional associates display "an attitude often of exasperation, consternation and indignation with respect to the bureaucratic administration of government programs."

"Administrative regulations," Doctor Livingstone said, "often expand upon or subvert the intent of Congress." This is why, he explained, the AMA for the first time in its history recently sued the HEW Department over the UR regulations. Federal Judge Julius Hoffman upheld the AMA's contentions and issued a restraining order against carrying out the UR rules. The HEW Department has recommended that the case be appealed.

Argument Against Admission Review

A key AMA argument was that admission review within 24 hours is directed almost solely to protect hospitals against possible non-reimbursement—not the patient's health. Judge Hoffman said that if "patients who cannot pay cannot be hospitalized when diagnosis is unclear, the potential injury to the patient's health may be irreparable."

Edgar T. Beddingfield, M. D., Vice Chairman of the AMA Council on Legislation, said HEW barged ahead on the physician's Medicare fee index without giving interested parties a chance to question the details of the regulations. There is no justification in either the law or its legislative history for imposition of a national economic index, Doctor Beddingfield told the panel, noting that Medicare fee recognition "has long lagged behind current trends in physicians' fees. Because of the unique two-year delay, he said the index limitations could result in shifting the financial burden to Medicare-Medicaid patients by driving reimbursement further below realistic fees.

Also criticizing the Medicare fee constraints was John Alexander McMahon, President of the American Hospital Association.

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Obituaries

EDWARD N. MORGAN, M. D.

Dr. Edward N. Morgan, a retired physician in Huntington, was found dead at his home there on June 3. He was 76. Doctor Morgan was a physician with the Huntington Regional Office of the Veterans Administration from 1946 until his retirement in 1965.

A native of Groveland, New York, he received his M. D. degree in 1922 from the University of Maryland School of Medicine. He was a veteran of World War I.

The only survivors are seven nieces and nephews.

* * *

EDNA VIRGINIA JUSTICE, M. D.

Dr. Edna Virginia Justice of Ashland, Kentucky, formerly of Philippi, died on June 22 at her home in Ashland. She was 68. Doctor Justice, an obstetrician-gynecologist, was the sister of Drs. Karl J. Myers, Sr. and Hu C. Myers of The Myers Clinic in Philippi.

A native of Nestorville, she was graduated from Broaddus College and received her M. D. degree in 1934 from the University of Tennessee School of Medicine. She was a Fellow of the American College of Surgeons.

Doctor Justice was a partner of The Myers Clinic for some years until 1951, when she accepted the position of Chief Medical Officer of the Civilian Employees Health Services at the Pentagon in Washington, D. C. She was a past member of the West Virginia State Medical Association. She formerly was married to the late Dr. Everett O. Jeffreys of Winston-Salem, North Carolina.

Surviving in addition to the brothers are the husband, Edgar T. Justice of Ashland, and a son, David Jeffreys.

* * *

EMORY V. JORDAN, M. D.

Dr. Emory V. Jordan of Charleston, a retired urologist and surgeon, died on July 11 at his home. He was 76. Since retiring, Doctor Jordan had volunteered his services in Putnam County.

He was graduated from the Tennessee Military School and received his M. D. degree in 1926 from the Medical College of Virginia.

Doctor Jordan was a member of the American College of Surgeons and a former member of the West Virginia State Medical Association. He was a veteran of World War II.

Surviving are the widow and a sister, Mrs. R. H. Walker of Charleston.

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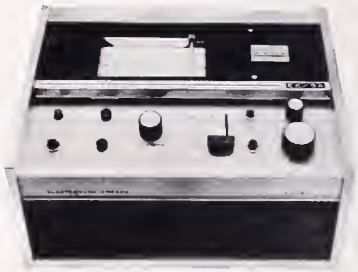

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County Societies

CABELL

The Cabell County Medical Society met on June 12 in Huntington. The guest speaker was Mr. Jack Roche of the Aetna Life & Casualty Company in Charleston. Mr. Roche discussed the current malpractice insurance problem. Aditional comments on this topic were made by Dr. Charles A. Hoffman of Huntington, Chairman of the State Medical Association's Insurance Committee.

Mr. James Harlan, representative of Blue Shield, talked briefly regarding the Blue Shield UCR Program and the Blue Shield Workshop which was to be held in Huntington in July. He made a plea for better communication between Blue Shield and physicians and requested that a review board be set up to help Blue Shield evaluate the charges by physicians for various services.—Colin M. Craythorne, M. D., Secretary

Change Of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

Pre-School Immunization Reminder Goes To State's Parents

Dr. N. H. Dyer, Director of the West Virginia Department of Health, advised parents to review their child's immunization records in a recent issue of the Department's *State of the State's Health.* In a few weeks, Doctor Dyer said, some 59,000 children will be registering for school entry. Approximately 27,000 will enter kindergarten while 32,000 will be first graders. House Bill 569, which was signed by the Governor of West Virginia on March 5, 1973, requires that all children entering school for the first time be immunized against rubella (German measles), rubeola (regular measles), polio, diphtheria, whooping cough (pertussis), and tetanus. Immunizations actually should begin early in life. The Compulsory Immunization Law recognizes that school aged children are the primary source for the spread of these diseases. Many of the preventable diseases have been reduced in the State but control efforts need to be continued.

(As part of a continuing effort to reduce the incidence of childhood diseases and eliminate the threat of widespread epidemics, the U. S. Center for Disease Control has designated October, 1975, as "Immunization Action Month." Unfortunately—despite effective efforts in 1973 and 1974 to increase the immunization levels of preschoolers—more than five million preschoolers are still unprotected, according to the American Academy of Pediatrics).

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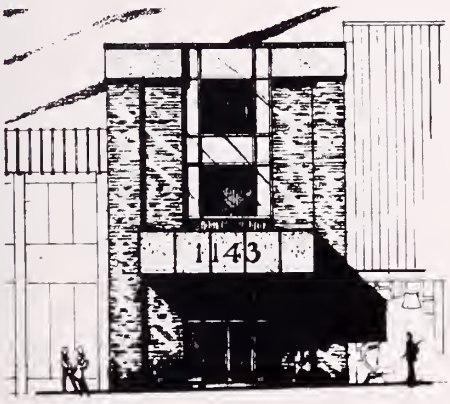

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Central West Virginia	I. Frank Hartman, II	Buckhannan	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fagle	Martinsburg	2nd Wed.
Fayette	Joe N. Jarrett	Oak Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pope	White Sul. Spgs.	T. O. Dotson	White Sul. Spgs.	2nd Wed.
Hancock	Irwin M. Bogarad	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Charles S. Harrison	Clarksburg	W. E. Williamson	Clarksburg	1st Thurs.
Kanawha	George A. Shawkey	Charleston	Richard C. Rashid	So. Chorleston	2nd Tues.
Logan	Jorge J. San Pedro	Man	Enrico V. Rallos	Man	2nd Wed.
Marion	Robert G. Janes	Fairmont	Mary Jordan	Fairmont	Last Tues.
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Mason	Antonio G. Sola	Pt. Pleasant	Young Choi	Pt. Pleasant	4th Tues.
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Mercer	James P. Thomas	Bluefield	John J. Mahood	Bluefield	3rd Mon.
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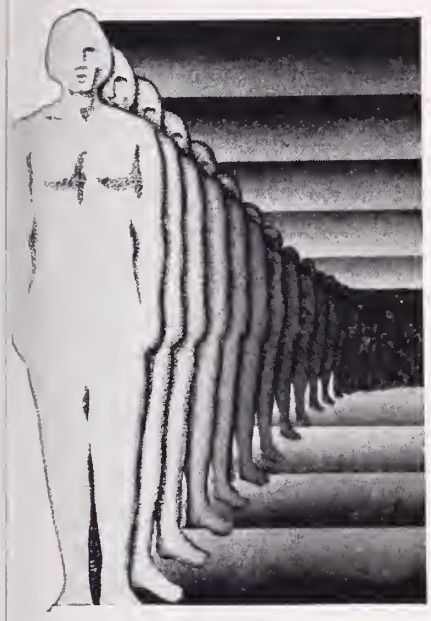

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 to 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
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FOR THE PATHOGENS

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Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

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(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies. *Important Note:* Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

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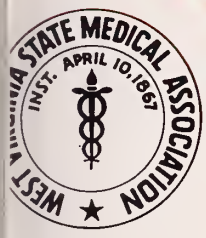

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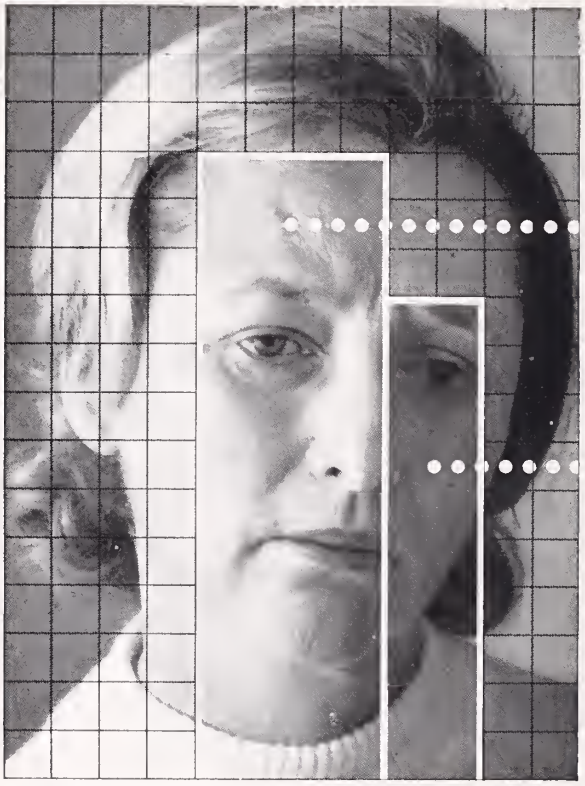

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase and/ or severity of grand mal require increased dosage of convulsant medication; abru may be associated with temp crease in frequency and/ or s seizures. Advise against simu gestion of alcohol and other sants. Withdrawal symptoms those with barbiturates and occurred following abrupt di (convulsions, tremor, abdom cle cramps, vomiting and sw addiction-prone indlviduals

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in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

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2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

e because of their predisposi-
tuation and dependence. In
lactation or women of child-
, weigh potential benefit
sible hazard.

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arbiturates, MAO inhibitors
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isual precautions indicated in
erely depressed, or with latent
or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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SEPTEMBER
1975

Vol. 71 No. 9

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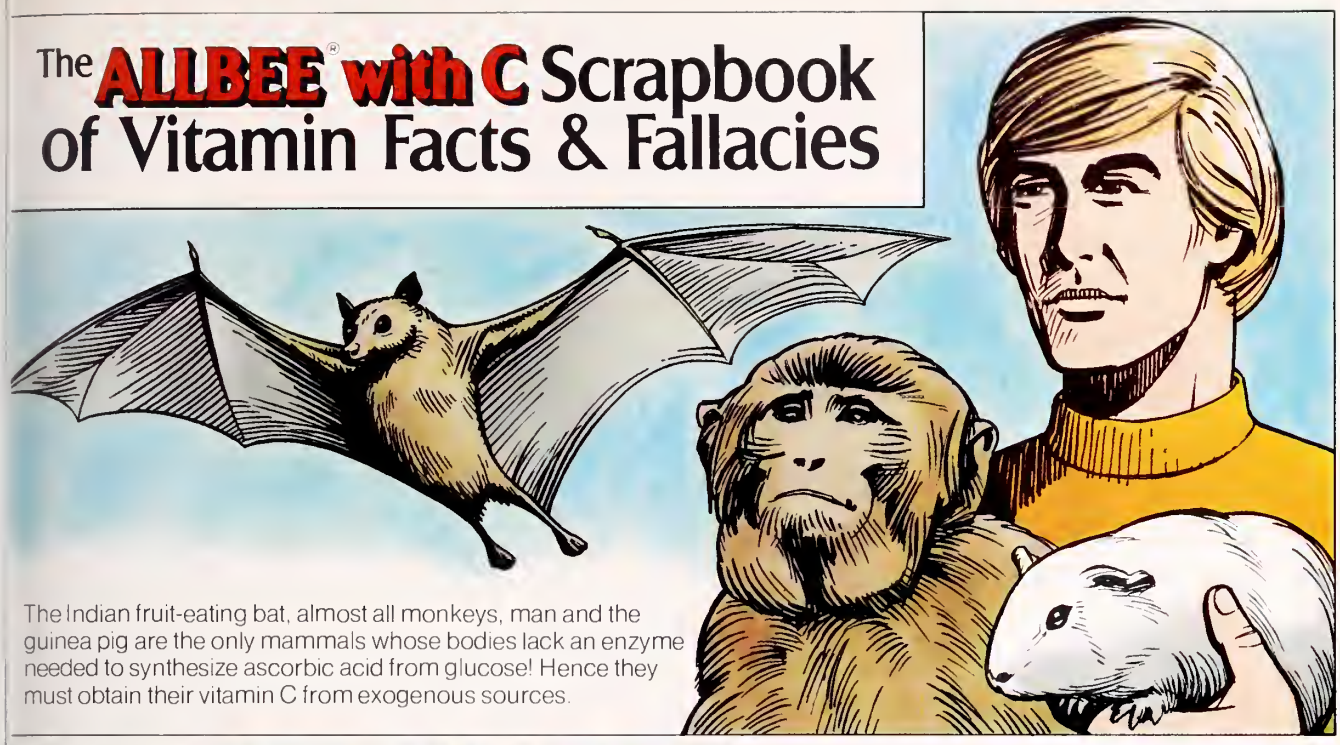

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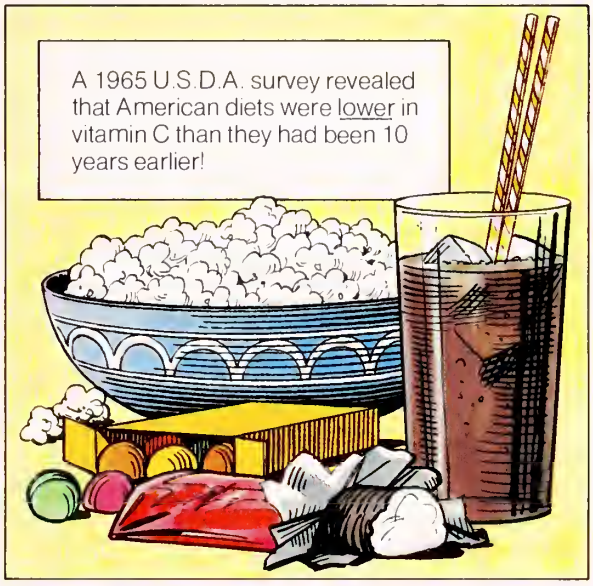

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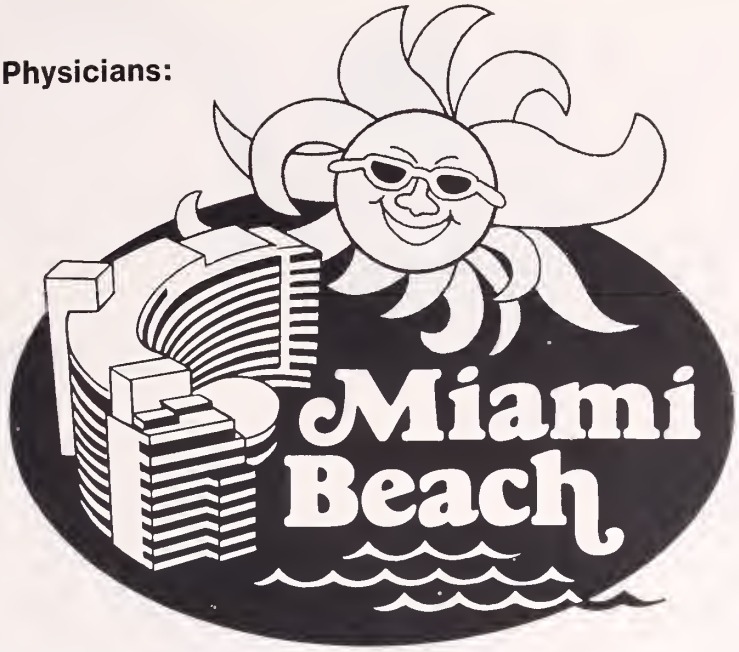

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CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

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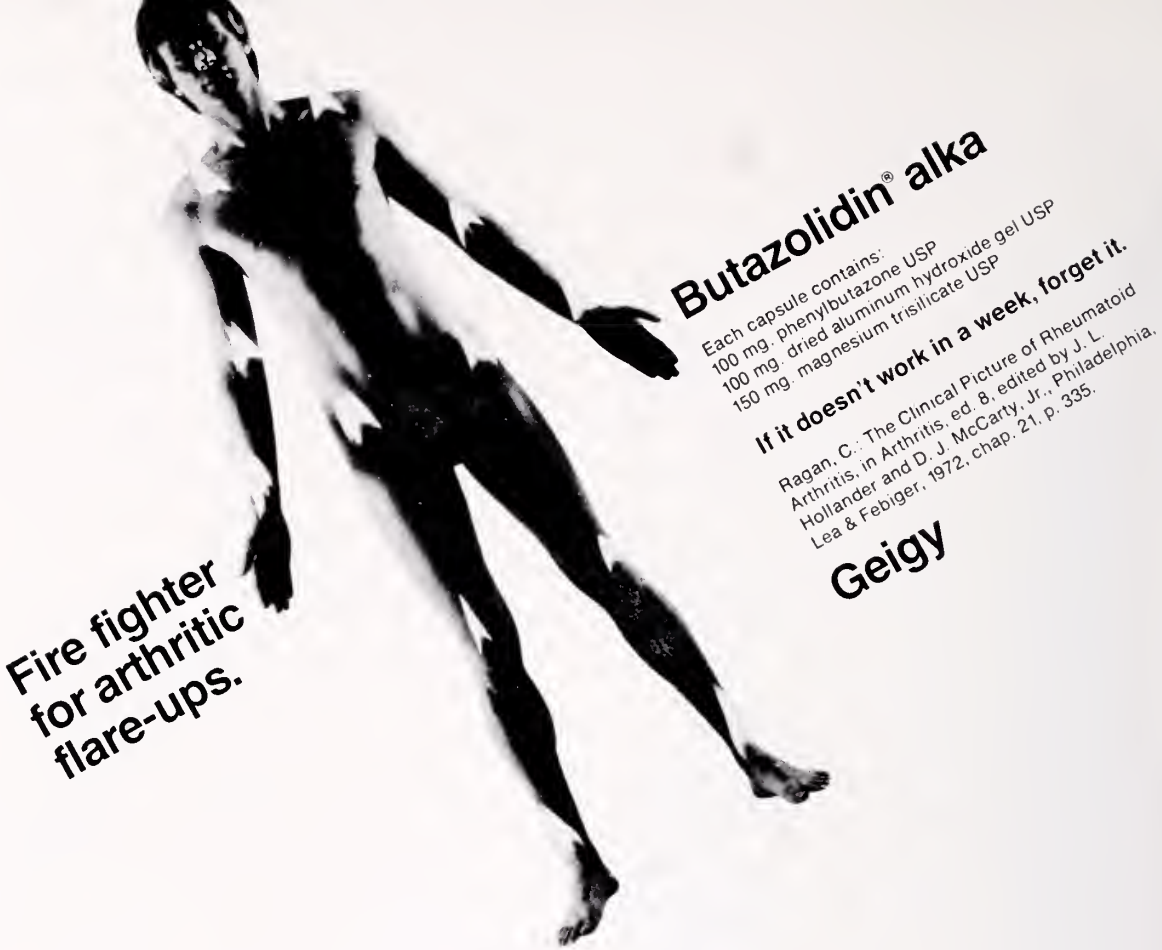
Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.
Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.
Butazolidin® alka
Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP
If it doesn't work in a week, forget it.



Important Note This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions. This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
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The West Virginia Medical Journal

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Localized Dissecting Aneurysm Of The Aorta: A Clinicopathological Study

F. Anthony Greco, M. D.; Abnash C. Jain, M. D.; Allen F. Bowyer, M. D.; And Robert J. Marshall, M. D.

Aortic dissecting aneurysm, described pathologically by Morgagni more than 200 years ago, is found in one of every 10,000 general hospital admissions and one of every 363 autopsies.[1,2] The diagnosis, suspected from clinical presentation and plain chest roentgenography, requires aortography for confirmation. Appropriate management precisely depends on diagnosis and demonstration of the site and extent of the lesion by aortography.[3,4,5,6,7] We recently saw a patient with a small dissecting aortic aneurysm who presented a problem in definitive diagnosis which represents one of several diagnostic difficulties encountered in patients with aortic dissections.

The Authors

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Case Report

A 57-year-old white male was transferred to West Virginia University Hospital on April 3, 1974, for evaluation of hypotension and left hemothorax. He had been treated for hypertension for the preceding 15 years and in December, 1973, had an enlarging abdominal arteriosclerotic aortic aneurysm resection. He was asymptomatic until March 23, 1974, when he experienced severe anterior chest pain, diaphoresis, and nausea before admission to a local hospital. Serial electrocardiograms and serum enzymes did not support a diagnosis of myocardial infarction. The morning prior to transfer, a left pleural effusion was found and tapped, yielding 1000 cc. of bloody fluid. Review of a previous portable chest x-ray was suspicious for a widened mediastinum when compared to old films.

Physical examination revealed a tachypneic but alert male with a supine blood pressure of 90/50 in both arms, respiratory rate of 32/min., and a pulse of 130/min. All pulses were symmetrical and fundoscopic examination showed retinal arteriolar attenuation. There was flatness to percussion and decreased breath sounds over the left hemithorax, but no tracheal tug or shift was detected. A loud, holosystolic murmur at the cardiac apex with radiation over the entire precordium was noted. A vertical abdominal scar was also noted.

Laboratory studies included: Hemoglobin, 9 gm. per cent; hematocrit, 28 per cent; BUN, 86 mg per cent; PCO_2, 26 mm. Hg; ph, 7.42; PO_2, 63 mm. Hg. Chest x-ray showed an opaque left hemithorax and an electrocardiogram revealed left ventricular hypertrophy. His blood pressure increased to 170/90 after transfusion of five units of whole blood. Retrograde catheter femoral aortography of the thoracic (Figures 1, 2) and abdominal aorta revealed no false channel, narrowed aortic lumen, or intimal tear. No extraluminal contrast material or localized irregularities were recognized. The abdominal study demonstrated patency of the aortic graft with no other abnormalities. A diagnosis of idiopathic hypertrophic sub-aortic stenosis was made by a characteristic fast rising pulse tracing, 60 mm. Hg pressure gradient between left ventricular cavity and left ventricular outflow tract and demonstration of a typical hour glass deformity of the mid-left ventricle on left ventriculography. An echocardiogram revealed thickened intraventricular septum and a systolic anterior motion of the mitral leaflet.

Figure 1. Posterior-anterior aortogram showing normal appearing ascending aorta, with massive left pleural effusion.

Chest tube drainage of the left pleural cavity yielded 1500 cc. of bloody fluid with a hematocrit of 18 per cent. Despite adequate blood replacement, he became oliguric and more azotemic. Chest tube drainage was only 150 cc. serosanguinous fluid over the next few days. Peritoneal dialysis was begun, but cardiac asystole occurred on the sixth hospital day, and attempts at resuscitation were unsuccessful.

Figure 2. Lateral aortogram revealing normal aortic configuration.

Autopsy

Examination showed 200 cc. of serosanguinous fluid in the left pleural cavity. There was an egg-shaped magenta hematoma, 6 cms. by 3 cms., in the wall of the anterior transverse arch of the aorta proximal to the left subclavian artery and 12 cm. from the aortic valve (Figure 3). A 1.5 cms. intimal tear was located 10 cms. from the aortic valve in a markedly arteriosclerotic aorta (Figure 4). The intima was not displaced or compressed by the hematoma. A longitudinal section of the aortic wall revealed an intramedial thrombosed hematoma three mm. wide and six cm. long (Figure 5). Histologic section disclosed loss of smooth muscle and elastic tissue in the media with minimal fibrosis and hyalin-like changes. The thrombosed hematoma was compressing the left pleura slightly but no tear or rupture was evident. The heart weighed 550 grams. The left ventricle and intraventricular septum were extensively thickened with bulging of the septum into a very small left ventricular cavity and narrowing of the aortic outflow tract. The cardiac valves were normal, but the coronary arteries were strikingly arteriosclerotic. The

Figure 3. Heart with attached aorta demonstrating local bulging of aneurysm in the transverse arch.

Figure 4. Heart with attached opened aorta exposing intimal tear (arrow).

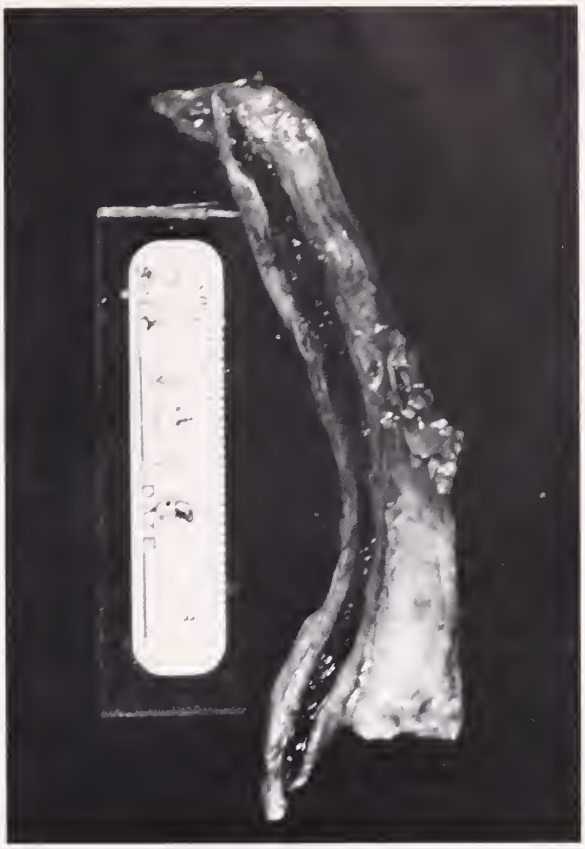

Figure 5. Longitudinal section of dissecting intramural hematoma.

abdominal aorta was intact with complete epithelialization of the Dacron graft. Microscopic examination of the kidneys showed hydropic tubular changes and vacuoles consistent with acute tubular necrosis.

Discussion

In the past decade, successful management of dissecting aortic aneurysm has been developed. Antihy*per*tensive drug therapy and surgical therapy individualized to the particular circumstances have yielded a success rate of 80 to 90 per cent.[7,8] Definitive diagnosis and characterization of the lesion by intravenous or retrograde catheter aortography is essential to plan the therapeutic approach. Either method of aortography yields the necessary information in most cases, but the selective retrograde catheter technique has become more popular.[5,6,9] The unequivocal diagnosis requires aortographic demonstration of a false channel with intimal tear or compression of the true aortic lumen by the intramural hematoma.[4,9] Slight irregularities of aortic lumen or thickening of the wall are suggestive but not diagnostic.

Problems in the aortographic diagnosis are not infrequent.[9,10,11,12] Diagnostic difficulties were encountered initially in 10 of 44 patients in one group, which after further study utilizing meticulous technique, four patients remained without definite diagnosis.[9] Pathological follow-up was not reported on these patients. Angiographic interpretative problems and false positive or negative examinations can result from a limited examination, thrombosis or localized opacification of the false channel, thickening of the aortic wall, equal simultaneous opacification of both channels, unusual intimal tear, hemothorax on the left, adjacent tumors or shadows, aortic insufficiency, and a decreased cardiac output.

Complete evaluation of the aorta with multiple projections, catheter manipulations, selective abdominal injections or even repeat studies may be required to diagnose dissecting aneurysms. A localized dissection may fail to visualize on biplane aortograms and necessitates oblique projections to visualize the intimal tear, a short spiraling false channel, or lumenal contour irregularities. Unfortunately, contrast material appearing to be outside the lumen in oblique films with normal posterior-anterior and lateral views has proven, on occasion, during surgery, to be an erroneous diagnosis.[12] The mechanism explain-

ing extralumenal contrast material in a normal aorta is obscure, but filling of adjacent adventitial vessels or intercostal veins has been proposed.[12] Abdominal aortograms may show narrowing or incomplete filling of visceral vasculature when thoracic aortograms are unrevealing.[6]

Layering of the contrast material within the aorta or equal simultaneous opacification of both false channel and true lumen are deceptive. A decreased cardiac output from heart failure, hypovolemia, a run of extrasystoles, or a strenuous Valsalva maneuver often creates an image which imitates a false channel. These entities and aortic insufficiency with a normal cardiac output often cause a settling of the dense contrast agent to the most dependent area of the aorta superficially simulating a false channel,[5] particularly with intravenous aortography.

Total thrombosis of the false channel prevents the contrast agent from filling an aneurysm; in which case, irregular contour of the central column or thickening of the aortic wall often provide suspicion of an aneurysm. In small cylindrical dissections, however, there may be no abnormality detected.[11] The aortic wall width in our patient could not be determined because a left hemothorax obscured the left descending aortic border. Thickening of the aortic wall is not a certain sign of dissection, however, as thickening can arise from other conditions such as arteriosclerosis, aortitis, laminated saccular aneurysms, and mass lesions contiguous to or within the aorta.

Our patient represents a case of a small dissecting aneurysm not demonstrated by selective retrograde catheter aortography, but manifesting striking clinical findings. His clinical presentation of chest pain with questionable widened mediastinum, hemothorax, non-diagnostic electrocardiograms, normal serum myocardial enzymes, and long-standing hypertension made the diagnosis of aortic dissection highly suspect, but unfortunately, it was not confirmed until autopsy.

The remarkable localized nature of the dissection made aortographic demonstration and definitive ante mortem diagnosis impossible. The cylindrical lesion did not produce contour changes of the opacified aortic channel, nor visible extralumenal leaks. Total thrombosis of the narrow false channel prevented contrast visualization. Considering the pathology of the lesion, it is doubtful that oblique films would have been informative.

The left hemothorax made the aortic wall immeasurable from aortography. Total aortic wall thickness measured at autopsy was five mm., and if determined in life by aortography, it would not have exceeded the limit of four to five mm. as stated by Kanick[12] as being diagnostic of dissection. The clinicopathologic data support the view that aortic wall thickness cannot be considered reliable in the diagnosis of dissecting aneurysm. Dissection can occur when the aortic wall width is within accepted standards, or dissection may be absent and other conditions can thicken the aortic wall.

The pathogenesis of the hemothorax was probably aneurysmal rupture into the left pleural space, although this was not obvious at autopsy. The aortic wall and pleural surface were intimately opposed, but the pleura appeared entirely intact. Pleural effusion occurring with an aortic dissection does not necessarily represent rupture or impending rupture, but can occur from weeping or diapedesis of red cells and serum from the aortic adventitia.[7,8] Despite our failure to find a frank rupture, it likely occurred and explains the massive hemothorax and hypovolemic shock which were present. The completely thrombosed dissection explains the sudden cessation of hemothorax.

Idiopathic hypertrophic subaortic stenosis was concomitantly present. The significance of this entity in relation to dissecting aneurysm is unknown although aortic stenosis, coarctation of the aorta, and bicuspid aortic valve have been reported as related to aortic dissection.[2,13]

Reluctance in performing thoracotomy was a result of our inability to demonstrate the lesion, the lack of continuing hemothorax, and the patient's poor general condition which included uremia from acute tubular necrosis. The localized dissection was not detectable by aortography and pathological correlation explained its elusiveness.

Summary

A clinicopathological study of a patient presenting with dramatic clinical findings from a localized dissecting aneurysm of the aorta not visualized by aortography is described. Complete thrombosis of the narrow false channel prevented contrast visualization, and additional angiographic criteria were absent or misleading as demonstrated at autopsy. Other problems arising in the angiographic diagnosis of aortic dissections are discussed and the importance of definitive diagnosis is re-emphasized.

A list of references may be obtained by writing The Journal.

Office Curettage

Robert P. Pulliam, M. D.

DILATATION and curettage is one of the most common reasons for hospital admissions in women and has remained so for many years. The advancement of modern technology, spurred primarily by the need for low cost outpatient abortion services, has resulted in the ability to provide outpatient D&C in the great majority of diagnostic and therapeutic problems. Reduction in per-patient cost and added convenience to patient and physician are important additional advantages.

The purpose of this paper is to present experience with this procedure and to evaluate it properly in regard to its place in the armamentarium of the obstetrician-gynecologist.

Material and Methods

There were 139 women, age 15 to 70, seen in the private office setting (Table 1). Obstetrical history is shown in Table 2 and clinical indications for the procedure are listed in Table 3.

A sterile prepackaged disposable aspirator (Cooper Laboratories, Inc., Wayne, New Jersey) was used for the curettage. This instrument consists of a 210 mm. steel tube of 3 mm. in outside diameter. The curved top has a 2 mm. x 16 mm. opening. The curette is attached eccentrically to the plastic cap which fits the 25 cc. plastic container which contains a perforated plastic inner filter. The container is connected by plastic tubing to a suction pump capable of producing 20″ of negative pressure. Upon completion of the curettage, the plastic container serves as a specimen container. Caps are provided and with addition of suitable fixative and minimal handling, the specimen can be transported directly to the pathologist.

TABLE 1
Age Profile

Age Group	*Number*	*Per Cent*
15-20	4	2.8
21-25	18	12.9
26-30	13	9.4
31-35	13	9.4
36-40	12	8.6
41-45	19	13.7
46-50	30	21.6
51-55	19	13.7
56-60	7	5.1
> 60	4	2.8
Totals	139	100.0

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- **Robert P. Pulliam, M. D., 120 Professional Park, Beckley, West Virginia.**

TABLE 2
Obstetrical History

Nulligravida	11
Gravida 1-5	107
> 5	21
Total	139

The women in this series all underwent the procedure at the time of routine or emergency office visits. No prior preparation was required and no pre-procedure medication was given. The cervix was cleansed with alcohol, Zepharin, Betadine or water, depending upon the operator. To avoid the occasional troublesome post-tenaculum bleeding, a long Alyce clamp was used for cervical traction. The uterus was sounded for both depth and direction of cavity. No further cervical dilatation was required. The curette was then advanced to the fundus, the suction release hole covered with index finger and the instrument withdrawn. This was done around the entire circumference of the uterine wall. Although initial use of the instrument was somewhat awkward, with experience complete curettage could usually be performed in less than two minutes. Curettage was not attempted if a standard sound could not be passed with ease or without undue discomfort to the patient. Most patients experienced mild menstrual-type cramps during the procedure, but in no case was it necessary to terminate the procedure because of patient discomfort. Following completion of the procedure, the patient was observed for 30 minutes, then released with instructions to limit douches and intercourse for one week. All patients were either seen or called within one week to report the pathologic findings.

Results

The clinical indication for office curettage is shown in Table 3 and the corresponding histopathologic diagnosis in Table 4.

Twenty of the patients were subsequently admitted for definitive surgical therapy. Three of these were for D&C for recurrent bleeding not controlled by office curettage; 16 patients under-

TABLE 3

Clinical Indications

Menorrhagia	81
Postmenopausal bleeding	36
Infertility	11
Intermenstrual bleeding	4
Incomplete abortion	7
Total	139

TABLE 4

Histopathological Diagnosis

Normal endometrium		115
Secretory phase	108	
Proliferative phase	7	
Incomplete abortion		6
Decidua		2
Cystic hyperplasia		1
Adenomatous hyperplasia		13
Endometrial adenocarcinoma		2
Total		139

TABLE 5

Hysterectomy Indications

Adenocarcinoma	2
Postmenopausal adenomatous hyperplasia	10
Recurrent menorrhagia	3
Pelvic relaxation	1

went subsequent hysterectomy and the indications are shown in Table 5. The remaining two patients had subsequent surgery for surgical sterilization unrelated to the bleeding problems.

In all cases, except one, undergoing subsequent surgery the pathologic findings were identical to those reported from the office specimen. In one case a large polyp was removed at the time of the standard hospital D&C, apparently having been missed with the small curette in the office procedure.

Comparison of the volume of specimen obtained at office curettage with the volume obtained at standard hospital curettage indicates similar amounts of tissue are removed. The only discrepancies were those where infertility was the indication for the procedure and in those cases only enough specimen for adequate diagnosis was removed.

Discussion

Office vabra-aspiration curettage without anesthesia has proved to be an acceptable, simple, and reliable method for management of most bleeding problems. Other authors using similar study outlines have reached the same conclusion.[1,2,3,4,5,7,8] Comparison of tissue obtained by vabra-aspiration followed by standard D&C or hysterectomy has confirmed the reliability of the method.[8]

Complications are infrequent and generally limited to mild pain comparable to that associated with the insertion of an IUCD. Vaso-vagal reaction or syncope occasionally occurs and is easily managed. No post vabra-aspiration hemorrhage or infection occurred in our series, but these complications have been reported. Post-procedure bleeding is comparable to that following standard D&C.

If anesthesia is required, para-cervical block is simple, rapid, effective and generally without complications. In our experience it was not necessary. Its use, however, could have allowed cervical dilatation in patients with cervical stenosis.

Shortly after introduction of this procedure in our office it became obvious that the physician was more aggressive in using vabra-aspiration rather than temporizing with abnormal bleeding. This practice is especially valuable in the bleeding postmenopausal patient on estrogen and often allows prompt resolution of the problem without hospitalization. Similarly, in the menstruating-age patient, bleeding can be promptly and decisively dealt with without the expense of hospitalization or the inconvenience of continued vaginal bleeding.

Review of data supplied by Blue Cross Hospital Service, Inc., Charleston, West Virginia, is indicative of the economic savings of the procedure. Table 6 lists average length of hospital stay for D&C by diagnosis.

The great majority of hospital D&C's are performed on young women with menorrhagia. Use of office vabra-aspiration would conservatively have eliminated 80 per cent of all admissions for D&C or 792 hospital days without sacrificing quality of care. Considering a $100 per day cost of D&C hospitalization, it is obvious that there is considerable economic benefit to outpatient D&C. In addition, physician fees are generally less for outpatient procedures.

TABLE 6

Length of Hospital Stay

	Patients	*Days*	*Average LOS*
Menorrhagia	256	899	3.5
Postmenopausal bleeding	26	80	3.1

It must be realized that not all D&C's can be performed on an outpatient basis. Reasons for not doing office vabra-aspiration are: (1) Medical contraindications such as heart disease and

epilepsy; (2) gynecological contraindications such as cervical stenosis, irregular cavity, or presence of pelvic infection; (3) poor patient acceptance; (4) need for supplementary examination or procedure under anesthesia; and (5) physician inexperience.

In regard to physician inexperience it must be remembered that hospital D&C is not an innocuous procedure even in experienced hands. Perforation and intra-abdominal tissue damage are infrequent but dreaded complications. The potential for similar complications exists with office curettage and as its use becomes more widespread reports of these will occur.

Conclusions

(1) Office vabra-aspiration (D&C) is a simple method for management and early diagnosis of abnormal bleeding in most patients.

(2) Specimen collection is greatly facilitated by instrument design.

(3) Patient acceptance of this procedure is excellent.

(4) A significant reduction in hospitalizations and increased convenience for both patient and physician are added benefits of the procedure.

(5) Reliability compares favorably with hospital dilatation and curettage.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

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Special Article

Trends In Medical Education*

Hartwell G. Thompson, M. D.

Introduction

CHANGE is a vital fact of life and medical education, like all of life's processes is no exception. Today, changes are occurring with a rapidity which sometimes produces a sense of turmoil and uncertainty. It may be useful, therefore, to review some of those events which occurred in the past, examine the state of the art at this time, and indicate some of our choices for the future.

Historical Review

Medicine and medical education may be divided into three or four general periods in the history of the United States: the Colonial period, the 19th Century (including the period immediately before the Flexner Report of 1910), the Flexnerian period (1910 to 1950), the golden age of the National Institutes of Health (1950 to 1968), and the "social era of medical education," or today's period.

The Colonial era has been well described by Dean Robert Ebert of Harvard who quotes Daniel Boorstin. It was characterized by a great involvement by the laity in medical affairs and minimal professionalism. The colonists did not adopt many features of British medicine which was dominated by guilds and was in disfavor as may be seen from the following quotation from William Byrd written in 1728: "The new proprietor (of New Jersey) inveigled many over by this tempting account of the country: that it was a place free from those three great scourges of mankind; priests, lawyers and physicians, nor did they tell a word of lye, for the people were too poor to maintain these learned gentlemen."

Unlike the British physicians or healers of the day, the American physician did everything from dispensing drugs to surgery and he was not constrained by legal or professional regulations. Medicine was mainly taught by the apprentice system. As Dr. Ebert notes, in the Revolutionary War period, there were a few medical departments established in some universities. The first one of these was the College of Philadelphia in which a professorship of medicine was established in 1756. This later became the first medical school at the University of Pennsylvania (1765). In short order, schools of medicine were established at Kings College in New York (the Columbia College of Physicians and Surgeons) in 1768 and at Harvard in 1783.

The Author

- **Hartwell G. Thompson, M. D., Professor of Neurology and Dean, Charleston Division, West Virginia University Medical Center.**

The 19th Century era was characterized by many proprietary medical schools, the first one of which was established in Baltimore. In the 19th Century, some 457 medical schools were started, most of them being proprietary. They were profit-making enterprises and had shockingly bad standards by present criteria. The usual admission requirements were the ability to read and write. Education was almost entirely by lecture with almost nonexistent laboratories and minimal exposure to patients.

In reading about these schools at this time, one wonders how they survived as long as they did. They probably survived because they provided a certain minimum amount of information about medical problems in that day and they provided a great output of physicians so that every town on the frontier or in the rural areas of this nation had some type of physician. It also must be remembered that there was very little known about the natural sciences in that time which was applicable or at least applied to medicine. It has been said of physicians of the 19th Century that a patient had about a 50/50 chance of being better for having encountered a physician.

This is painful for me to recall because my grandfather was a product of one of the schools criticized by Flexner. It closed its doors in 1922. Although my grandfather, who practiced in eastern Connecticut, was a saintly man and a marvelously effective physician and kept growing and learning from his experience, it is still disheartening to think of him having been trained in such a rudimentary way. Flexner made the following comments about my grandfather's

*Portions of this paper were delivered during the Spring Meeting of the West Virginia Dietetic Association, April 8, 1975, in Charleston, West Virginia.

medical school: "The laboratory branches are taught in a medical school building, with the exception of chemistry which is well provided in a college library. The equipment covering physiology, bacteriology and pathology is slender. There is nothing in pharmacology at all. There are no full time teachers in the scientific branches . . . in anatomy, the professor looks in occasionally. The professor of pathology is the physical director of the college." Under clinical facilities, Doctor Flexner noted, "The chief clinical reliance of the school is the general hospital (in another city) where instruction is given principally in the amphitheater and the majority of the cases surgical. Obstetrical work is not counted on. Interns do clinical laboratory work and make up case histories. The records are indexed only by name of patient. Additional clinical material is obtained at the eye and ear infirmary at Childrens Hospital, etc. Students spend also a small amount of time at a thoroughly wretched city dispensary where the cases are few, where no records are kept, and where not even copies of prescriptions are filed. The dispensary does not own a microscope." Flexner concluded his report by saying, "Neither end of this school meets the requirements for the teaching of modern medicine."

Thus, the stage was set for an extraordinary reception of this report. Very few reports, either public or private, have had such an impact. At the time Flexner wrote his report, there were approximately 155 medical schools, most of them proprietary with very bad standards, misleading advertising, selling chairs of medicine or professorships to the highest bidder, etc. Following his report, most of these were abandoned and almost all the remaining schools were affiliated with universities. Flexner had high praise for the Johns Hopkins University School of Medicine. He indicated that several others deserved to survive, such as Harvard Medical School, the University of Pennsylvania, and others of comparable quality. After this, university medical schools developed the "Flexnerian curriculum" which consisted of two years of basic sciences with emphasis on gross anatomy, pathology, physiology, microscopic anatomy or histology, bacteriology, and later, biochemistry and pharmacology.

There was emphasis on individual attention and laboratory experience for students. In the third and fourth years of medical school, students were exposed to the basic disciplines of medicine such as internal medicine, pediatrics, obstetrics and gynecology, surgery and psychiatry, with a graded type of exposure to patients. This again emphasized small group instruction and direct patient care under close supervision.

Changes From 1950 To 1968

The curriculum reforms of the Flexnerian period served the nation's needs remarkably well for 40 years. After World War II, there was an explosion of new knowledge in the biological sciences and clinical medicine which resulted from many forces, among which included very generous funding by the federal government for the National Institutes of Health. Although most of this funding was designated for research in broad general categories, such as heart disease, cancer, neurological disorders, etc., a significant portion of these funds was diverted into education. One of the results of this was the increasing production of students with more and more interest in discrete areas. This led to increasing specialization.

It may be worth noting that specialization of physicians officially started as early as 1916 when the ophthalmologists established a group entitled, the American Board of Ophthalmic Examinations. This later developed into the American Board of Ophthalmology in 1933 and became the first board for formal certification of candidates. The last board to be formed was the American Academy of Family Practice which came into existence in 1969.

As emphasis on specialization developed, medical educators recognized that it was manifestly impossible to give students a critical amount of information on each important subject which would be satisfactory for the student's needs for the remainder of his or her professional life. This led to significant developments in the mid-sixties, especially 1967 to 1970. With these changes, medical schools recognized the need for core courses which would provide a basic amount of information in broad areas, such as medicine, pediatrics, surgery, etc., and with many electives following this. It became possible for students to develop "tracks" in which certain disciplines were emphasized, such as cardiovascular disease, neurological disorders and endocrine disturbances. Another significant change which occurred in the late 1960's was earlier clinical exposure with students having some contact with patients almost from the first semester of medical school. This also led to a development of combined teaching of clinical and basic sciences. Both of these changes; that is, early clinical exposure and the combined teaching, were given great emphasis by Case Western Reserve University and were soon emulated by other schools.

Other changes have been elective offerings in nontraditional areas. These include: *ethics* (courses involving the treatment of the dying patient, the rights of human subjects, structuring of clinical trials, and other types of clinical research); *economics*, which has been stressed by several schools as the younger generation of medical students shows greater interest in the cost of providing health care; *sex education* courses for health professionals, introduced as a result of an awareness that many physicians are poorly educated about sexuality and normal human sexual behavior; and *nutrition*, coming as a result of growing awareness of problems related to inappropriate diet and excessive caloric intake. These courses have frequently been given in response to pressures from students. Still other changes could be cited.

With all of these developments, medical educators became increasingly aware that students were interested in specialty medicine and few students were choosing careers as primary physicians—general internal medicine, pediatrics and family practice. This recognition that there was not only a physician shortage but a physician distribution problem has been very much with us since 1970. The distribution problem includes not only too few students choosing the primary care disciplines but also the lack of physicians in areas other than suburbs. Rural areas and the inner cities have been left with very unfavorable physician-to-patient ratios.

In recent years, the number of entering medical students rose from 8,759 in 1966 to almost 15,000 in 1974. During this period, the demand for places increased and we still have, in spite of the present number of about 15,000 first places in 114 medical schools, three applicants for each first-year position in medical school. Due to a pool of excellent applicants and a reasonably good selection process, attrition rates have been low—probably less than 5 per cent over the four-year medical school time frame.

Area Health Education Centers

The Carnegie Commission published another interesting report. This one appeared in October 1970 and was entitled, "Higher Education and the Nation's Health." In this, the commission proposed the creation of Area Health Education Centers (AHEC's). The commissioners had in mind institutions which would be oriented towards the clinical aspects of medicine, would be part of a university system, and would stress the training of primary care health professionals in communities away from the parent university. They did not visualize a weakly structured "university without walls" concept. They knew that the production of physicians and other health professionals required excellent community hospitals with many impressive resources, such as a nucleus of full-time faculty and a commitment of volunteer faculty physicians to provide the training or establish the educational milieu. Further, the commissioners hoped that this would be one force in helping to cope with the maldistribution problem. Virtually no one on the commission (or elsewhere) felt that this was a total answer to the "physician shortage problem" or the "physician distribution problem." It was seen as one helpful factor or change.

Other Area Health Education Centers have been created by the Regional Medical Program which stressed service—and not a direct tie to a university—and the Veterans Administration Hospital system which is somewhat of a combination of the Bureau of Health Resources and Development and the Regional Medical Program approach. The VA views its AHEC's not only as helping the community improve its services but also as a way to involve the traditionally isolated VA hospital with its community. The VA has had recent support by Congress to help establish (at first eight and then finally five) new medical schools in which the VA hospital system would be a major component.

West Virginia University was one of 11 universities in the nation to receive a contract from the Department of Health, Education and Welfare through its Bureau of Health Resources and Development. This contract enabled the university to proceed with plans (already under way) to establish an outreach program in the major population area of the state. In effect, the Area Health Education Center (AHEC) contract provided the university with some "front end" capital which allowed it to expand its mission and to proceed more rapidly. This meant that instead of having a few medical students at the Charleston Area Medical Center for fourth-year selectives, an additional number of students could be served with greater depth. It also meant that a full third-year curriculum could be undertaken. The success of this program is due in large part to the students' appreciation of the fact that they are receiving an excellent medical education in a setting different from the traditional type of university hospital with patients referred because of extraordinarily difficult and sometimes virtually unmodifiable problems.

No one involved in outreach programs should underestimate the cost. The Institute of Medicine study completed in 1972 showed that the cost of educating a medical student was more than

$9,000 per student per year. In 1975 dollars, this has probably now become $12,000 per student per year. This is a conservative estimate. One done by the Association of American Medical Colleges gives higher figures ($16,000 to $26,000). Even if the main mission of an outreach program is the training of primary care physicians, the process is still very complex. Family physicians or family practitioners must be taught pediatrics by pediatricians, internal medicine by internists, etc. In other words, an education milieu should be established in which the training occurs. In this, virtually all other major residency programs, such as medicine, pediatrics, obstetrics and gynecology, psychiatry, and surgery will need to be represented. The cost of establishing a family practice program, without even considering these other residency programs, will probably be in the range of $200,000 per year in a program of 12 trainees when the earnings of the unit are taken into consideration. This averages out to about $17,000 per trainee per year.

In order to achieve better balance in the education of medical students, emphasis needs to be given to the training of other health professionals and other types of education activities. At the Charleston Division of the WVU Medical Center, with support from the State and also using AHEC contract dollars, a *Division of Continuing Education* for all health professionals has been established. This division will work closely with existing programs in continuing education in dentistry, nursing, medicine and allied health. It will augment the present efforts of the West Virginia State Medical Association, specialty societies and the university in Morgantown. It is hoped that at appropriate points the group will cooperate with the West Virginia Medical Institute, Inc. in developing the education aspects of patient care audit and PSRO activities.

A second division which has been established is *Consumer Education*. This division seeks to help groups of consumers identify needs and serves as a catalyst so that they may modify their lifestyles in ways appropriate to achieving better health. It also hopes to assist the public in better and more efficient utilization of the health care system.

A third division is that of *Allied Health Education*, encompassing 18 Allied Health programs ranging from associate degree programs in nursing to x-ray or radiological technology programs. Most of these are based in part in community colleges and lead to an associate degree.

A fourth division is the *Learning Resources Center* whose mission is the building of an impressive medical library with appropriate audiovisual equipment. This will be housed in a building which will soon be under construction.

Finally, a *Division of Manpower Planning and Development* was established to assay the needs for certain types of health professionals in order to be sure that we are training those persons whom we need and that they will be adequately placed upon completion of their training.

In addition to these activities under the AHEC, there need to be developed other programs which will place physicians in training situations with nurse practitioners and physician's assistants, dental students and students in postdoctoral dentistry programs, baccalaureate nursing students, and students emphasizing advanced work in clinical pharmacy.

With these historical events in mind, several developments which have occurred on the national scene must be recognized:

(1) It should be noted that strong federal government involvement in the expansion of medical school enrollment is finished. Secretary Weinberger and his former Assistant Secretary for Health, Doctor Edwards, have indicated that they see no need for further increased enrollment. They appear to recognize that the problem is not inadequate numbers but problems of organization and distribution. Thus, one sure reality is the lack of general support by the federal government for financing medical education.

(2) Federal government bills now being considered may emphasize certain particular things in which government is interested, such as the emphasis on primary care, but direct subsidy to medical schools for training physicians is probably at an end.

(3) The biomedical research establishment, while not dismantled, will be changed. There will be and has been an increased emphasis on categorical disease programs.

(4) There is increasing pressure on university health science centers to develop comprehensive care programs for surrounding communities.

(5) There is a growing awareness of the need to exercise some control over the number of medical graduates recruited into various specialties via control of the number of postgraduate training positions. Several of the health planning and manpower bills being prepared by the 94th Congress emphasize this.

(6) Acceptance of the principle of national health insurance by both parties suggests that this legislation will be passed in the not too distant future.

Conclusion

The public in some parts of the United States has reacted to the problems of health care services with a sense of urgency and has adopted a simplistic approach with an attitude comparable to that which led to the Manhattan Project and the production of the atomic bomb. Engineering approaches to solving various problems (whether they be the riddle of cancer or improving health care services) will be extraordinarily expensive. They will miss the mark. The nation has witnessed the development of too many medical schools and the building of these schools in the wrong places, as was recently noted by Dr. Clark Kerr, Chairman of the Carnegie Council on Policy Studies. Instead of emphasizing Area Health Education Centers and more effective outreach programs for the production of health professionals in primary medicine disciplines, the nation is plunging pell-mell into the creation of a number of medical schools which may equal in number that of the 19th Century or the early part of the 20th Century when Abraham Flexner wrote his report.

Some of these schools are proposing medical curricula which de-emphasize natural sciences, laboratory experience, small group exposure to patients, and they are attempting to do this with inadequate numbers of full-time faculty in a way which is reminiscent of medical education prior to 1910. We must take stock and recognize where we are going. As with many other elements of the human condition, we need to study history (of medical education) or we will make the error about which Santayana warned us: "Those who fail to study history are doomed to repeat it." The first Flexner report was written 65 years ago. We may soon need another one.

Breast Cancer And Psychological Effects

How breast cancer affects the psychological health of patients and their families is the subject of a study at Stanford Research Institute (SRI).

Health researchers at SRI, with support from Stanford University Medical Center, the Kaiser Medical Group and the American Cancer Society, are seeking ways to improve the psychological well-being of breast cancer patients and their families.

In the study, sponsored by the National Cancer Institute, researchers will develop a demonstration program, drawing from two large hospitals that treat patients of diverse economic backgrounds. Such a program will consider the needs of women with breast cancer and their families during the detection, diagnosis, pre-treatment, rehabilitation and continuing care phases of treatment with an assessment of psychological impact. To do so, the research team led by Drs. Paul Insel and Joan Bloom will study the psychological aspects of breast cancer from detection through patient care.

Special Article

For Physicians, A Secondary Occupational Concern*

Hon. Robert E. Maxwell

Your secondary occupational concern today is the burgeoning number of malpractice civil actions in some of the courts of our land. Reactions predictably are varied.

I intentionally noted your concern with malpractice litigation as being *secondary*. As medical practitioners, your *primary* interest under any circumstances or conditions is always the quality of care and treatment your patients receive—and, if possible, their recovery—to the maximum level attainable by the learning of your profession and the skills of your training.

Your concern is not with the true malpractice—the typical dereliction from professional duty—case. Rather, your professional dread is the spurious type of malpractice litigation. The legal profession and the country genuinely share your anxiety.

The legal profession faces the same difficulties in this expanding field of law.

The root cause of this apprehension in the professions is as varied as the number of "expert opinions" sought. The most common denominator found from reasons advanced, it would seem, is our nation's—indeed the world's—movement from the so-called stratified society to the so-called open society. Since the mid-1960s, beginning with the antiwar movement, we have seen the appearance of intense "bent for change" groups, mostly under 30 years of age, seeking new ways and means for a "better world," searching for more "freedom and opportunity." This movement has made its mark in business, in industry and in our commerce.

The inquiry is how far should this "consumer society" affect the "learned professions"—and even more pointedly, how will the open society concept of our culture affect the quality of services rendered by the "learned professions?"

Admittedly, during the past decade, we have witnessed astounding advances in medicine, law and other fields. Most have come about because of advances in technology and improved communications. Many results have also developed because we may have failed to assimilate the relationship between certain of these breakthroughs and the dominant principles fundamental to the professions.

The Author

- **Hon. Robert E. Maxwell, U. S. District Judge for Northern West Virginia, Elkins.**

As with the state of affairs of the world, our nation and the professions, *nothing* can be gained by falling into a state of hopelessness, despair, pessimism or cynicism. Nothing constructive can be developed out of desperation and calamity. You have the confidence, faith and trust—and the knowledge—to accomplish the affirmative, to assure the positive.

Nothing can be gained by chucking our legal system, even if there are occasional imperfections. Nothing can be saved for the future by eliminating trial by jury of factual issues, even where there are occasional appearances of injustice. Centuries of trial and error have failed to produce a better system.

As a lawyer, I would like to believe the intonement of the lord chancellor in Gilbert and Sullivan's Iolanthe: "The law is the true embodiment of everything that's excellent—it has no kind of fault or flaw, and I, m'lords, embody the law."

Being practical, and hopefully reasonable, in evaluating my profession, I know the law is imperfect. It contains all of man's failings, his weaknesses, his prejudices. But, it also contains the sum total of man's experience, good as well as bad; all his wisdom, drawn from every source; all of his powers of reason, logic and deduction.

It is to the aspirations of the law that we direct our energies, realizing that the attainments of law too often reflect our shortcomings.

The law of the land embodies religious beliefs, the family unit, the academic community, the exploits of the scientific community, the voice of the news media and the habits and views of the

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public generally. These forces mold and shape our lifestyle, thus influencing the constant re-evaluation of our customs and habits. From these sometimes subtle, sometimes dynamic, capabilities emerges the institution known as the rule of law. It is accepted as sovereign in our society because it is comprehensive and because, as citizens, we possess the power to alter and modify its course.

Hopefully, as interested citizens, we will have the wisdom to make these changes in a profound and well-informed manner.

In a word, every member of our society must conduct himself as if he had a personal duty to uphold the sovereignty of the rule of law. And where we see failures and shortcomings, there must not be despair, but rather, encouragement. Everyone and every society must have ideals beyond present accomplishments.

The symptoms of a defeatism, against which we must constantly guard, are evidenced by questioning whether anyone cares, whether anyone is concerned with our immediate problem, whether anyone will listen, whether one can keep up with the events around us, whether any of the values of other generations can survive, and whether anything works. You may also detect the advanced symptoms such as being afraid, especially of the unknown; occasionally being bewildered; hostile; bombarded almost daily with the violent sensation that varies between the belief that we are on the verge of the worst—or on the brink of the best.

Malpractice, as a foreboding menace to the professions, and your determination to deliver quality health care, will abate. As you work toward that end, we will tonight take just one step above the contemporary, the day-to-day strife that swirls around us; that sometimes seems to engulf us.

We will remember that, if we but will it, the past is prologue; the key to the future; the vision of a dream fulfilled. Relying upon the integrity and experience of other years and generations, we assure stability to the degree we assume the personal opportunity to uphold justice.

The formula for this substantial and worthwhile contribution to the future of our way of life is found in the rudimentary canons of the learned professions. Theology, Medicine, Law—thru ages, learned professions—require: (1) extensive preparatory study; (2) continuing refreshment of knowledge; (3) dedication to welfare of man first, with remuneration second; and (4) constant searches for a higher and more noble consecration of human efforts rather than quest for material gain.

We must develop *individual characteristics*; such as honesty in the individual; integrity; hard work; thrift and concern, plus an interest in everything and everyone around us.

We must *create* in the perimeters of life around us: conviction; courage; strength of purpose; and freedom of the individual and our land from all manner of oppression and tyranny.

In conclusion, the task of the challenge is measured by the depth of our dedication; the rewards of accomplishment are perceptible to the degree of our commitment; the appraisal of our courage is the extent of our involvement; and the sincerity of our conviction is the criterion of our morality.

Committed as we must be to these principles and ethics, I paraphrase the words of Gilbert and Sullivan:

"Life is the true embodiment of everything that's excellent, . . . not necessarily easy and affluent . . .

"Life has no kind of flaw or fault that we cannot rightly challenge and attempt to properly correct . . .

"And we, m'lords, embody life with all its problems—are moved to see justice attained."

Searching out, striving for and being alert to the ideals and attainments of justice in our lives and those around us—there is no more noble goal to which we can dedicate our lives.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Associate Professor of Medicine

Bee Sting Anaphylaxis

Discussants: B. Thomas Brown, M. D.; Robert Burrell, Ph. D.; Lewis H. McConnell, M. D.; and Edmund B. Flink, M. D.

B. Thomas Brown, M. D., Medical Resident, West Virginia University Hospital.

Case Presentation

A 32-year-old farmer was admitted to the WVU Hospital emergency room 40 minutes after a bee sting. The patient stated that he had been in good health in the past, but during the previous summer he had had approximately eight bee stings. These stings caused some local erythema but no systemic effects. Approximately three weeks prior to his admission, he was stung on his arm and this sting resulted in severe erythema of his arm, some hoarseness of his voice, and swelling of his eyes. These symptoms subsided within a few hours.

The sting that brought the patient to the emergency room occurred on his left cheek. He then developed tingling in all of his extremities and blurred vision followed by the sudden onset of weakness and a generalized erythematous rash. On arrival in the emergency room parking lot he was wheezing, and thus he was immediately treated with 0.1 cc of 1:1000 aqueous epinephrine I.V. After being brought into the emergency room no blood pressure could be obtained, and a metaraminol (Aramine) drip was started. His pressure rapidly rose, but he then developed several premature ventricular contractions and continuous cardiac monitoring was begun. He was given 200 mg. of methylprednisolone (Solu-Medrol) and 50 mg. of diphenhydramine (Benadryl) intravenously. His cardiac rhythm stabilized, and he was transferred to the coronary care unit for observation.

The patient's blood pressure remained in the normotensive range without the need of further vasopressor administration. His rash disappeared and he was discharged from the hospital two days later with prescriptions for a bee sting kit and an appointment with an allergist. He suffered no obvious ill effects.

Discussion

The word "anaphylaxis" was initially used by Poitier and Richet[1] to describe the severe shock and subsequent death of some dogs upon reinjection of the poison of the sea anemone. This fatal response to repeat injection rather than protection or prophylaxis from the poison, prompted the word anaphylaxis.

The signs and symptoms of anaphylaxis are totally due to the actions of diverse chemical mediators. These mediators are released very rapidly by antigen activation of a definite number of target cells already sensitized by antibody. The chemical mediators (histamine, slow-reacting-substance-of-anaphylaxis, or SRS-A, and eosinophil-chemotactic-factor-of-anaphylaxis, or ECF-A) act to contract smooth muscle, increase vascular permeability, and attract inflammatory cells.

Histamine is found in greatest concentrations in mast cell granules, but it is also present in basophils, platelets, and the parietal cells of the stomach. Histamine increases capillary permeability, contracts bronchiolar smooth muscle, and stimulates exocrine gland secretions. SRS-A is not a preformed mediator and little is found prior to antigen challenge. This acidic lipid appears to enhance the vascular permeability and contract smooth muscle in a manner which potentiates the histamine effects.

The fact that neither histamine nor SRS-A attract eosinophils led investigators to find eosinophil-chemotactic-factor-of-anaphylaxis. ECF-A

was found to be a preformed acidic peptide also associated with the mast cell granule.[2]

Interestingly, the organ system affected by the chemical mediators of anaphylaxis differ from species to species. The main organ affected in the guinea pig is the smooth muscle of the bronchi which constricts, causing dyspnea, hypoxia and death. In rabbits the pulmonary arteries constrict, causing right heart failure, and in dogs, death results from constriction of the hepatic veins with resultant severe hepatic congestion. In man the lungs and vascular system are affected.

The clinical manifestations of anaphylaxis in man occur within seconds to minutes after exposure to the causative agent. The initial signs and symptoms usually involve the skin with diffuse erythema, a feeling of warmth, and generalized urticaria. These changes may be followed by respiratory distress due to bronchospasm and/or laryngeal edema. Gastrointestinal symptoms that occur include nausea, vomiting, abdominal cramps, and diarrhea. Vascular collapse without the dermal-respiratory complex of symptoms may occur following the above.[3]

In fatal cases showing clinical bronchial obstruction, the lungs revealed marked hyperinflation on both microscopic and gross examination. The acute emphysema is reportedly due to intractable bronchospasm. The angioedema in fatal cases occurs primarily in the epiglottis and larynx, but it is also seen in the hypopharynx and trachea.

It has not been proved that age, sex, race, occupation, or geographical location predispose to anaphylaxis. The only thing known to possibly predispose a patient to anaphylaxis is a history of atopic reactions, which is probably true only in regard to penicillin allergy. Atopic patients have a history of allergic symptoms upon exposure to an agent, a family history of a similar situation, and positive skin tests to certain allergens.

Austen[2] recently reviewed several studies which showed that five of 17 patients dying of penicillin-anaphylaxis were asthmatic and that 12 of 15 atopic patients developed skin-sensitizing antibody to penicillin after penicillin treatment, as compared to only 31 of 110 non-atopic patients. The materials that have been known to cause systemic anaphylaxis in man include proteins such as antiserum, hormones, enzymes, venoms, pollen extracts, food extracts, polysaccharides such as dextran, diagnostic agents such as contrast agents or sulfobromophthalein, and most commonly, therapeutic agents such as antibiotics and analgesics.

Treatment

The treatment of any anaphylactic reaction may vary according to the clinical signs and symptoms, but the initial step is the administration of epinephrine. Important steps in management are:

(1) place a tourniquet above the injection or sting site, removing it momentarily every 10 to 15 minutes; (2) place patient in recumbent position and elevate the legs; (3) administer 0.3-0.5 cc. of 1:1000 aqueous epinephrine subcutaneously or intramuscularly or 0.1 cc. intravenously and repeat as necessary; (4) give 0.1 to 0.2 cc. of aqueous 1:1000 epinephrine at the injection site; (5) establish and maintain an airway, first with an oral airway and, if necessary, with an endotracheal tube or tracheostomy; (6) give oxygen at four to six liters per minute; (7) take vital signs frequently; (8) give diphenhydramine (Benadryl) 50-100 mg. intravenously over three to five minutes; (9) if the patient is hypotensive, maintain the blood pressure with levarterenol (Levophed) or metaraminal (Aramine); and (10) if the patient is wheezing without vascular collapse, give aminophylline 500 mg. intravenously over 10 to 20 minutes. Adrenal corticosteroids will not be helpful in the acute anaphylactic reaction, but they may prevent protracted anaphylaxis and laryngeal edema.

Doctor Burrell will now discuss the immunology and various types of anaphylaxis and the current thinking on immunotherapy.

Robert Burrell, Ph. D., Professor of Microbiology, West Virginia University Medical Center.

Anaphylaxis can have at least three pathogenetic mechanisms. The most common one is due to reagin or IgE-dependent sensitization due to prior exposure to the antigen. This antibody class is cytotropic, i.e., the antibody attaches through the Fc (crystallizable fragment) portions of its heavy chains to mast cells and basophils. Subsequent reaction of two or more of these molecules with antigen results in a stress that is transmitted to the cell causing it to secrete the various pharmacologically-active mediators (histamine, SRS-A, and ECF-A) that result in the symptoms and signs of anaphylactic shock.

Anaphylaxis can also be triggered by antibody other than IgE such as in the case of transfusion reactions where the recipient has preformed antibody of the IgG or IgM class to formed elements or even serum proteins in the donor blood. This situation is sometimes called *cytotoxic* anaphylaxis, but the clinical result is the same.

A poorly-understood mechanism of anaphylaxis is frequently non-immunologic in that prior

sensitization is unnecessary to produce a shock. *Aggregate* anaphylaxis is produced following the intravenous administration of certain colloidal suspensions or finely-particulate suspensions. Agents known to be able to cause this aggregate anaphylaxis upon the first intravenous administration are iron dextran, certain radio-opaque dyes, and gamma globulin. The end result of all forms is clinically the same, but since the mechanism of pathogenesis for each is different, it becomes necessary to ascertain which mechanism is involved before responsible prophylaxis can be initiated.

It has been well established that specific immunologic therapy can be accomplished by appropriate administration of small, controlled doses of the offending antigen over an extended period of time. The accepted mechanism for this means of prophylaxis against future shock is that other classes of immunoglobulins are stimulated which will competitively inhibit IgE reaction on subsequent contact with antigen. Thus, since these other antibody classes occur in larger quantities in the circulation, antigen will preferentially react with them instead of the harmful IgE. Unfortunately, this method has met with limited success for desensitizing patients against stinging insects.

To begin with, there are at least 200 species of the order Hymenoptera in West Virginia that are capable of stinging humans, but of these only about 20 would be likely to do so. Even the informed layman can at best reliably identify but five or six of these and to most people anything that buzzes and stings is a "bee." Exact identification of the offending insect may be important.

Another, and more serious, drawback to specific immunologic therapy to stinging insect venom is that the commercially available antigens are made by grinding up the entire insect. Four or five of these insect species may be combined in one antigen, particularly for use on the patient who is unable to identify the culprit. As such, these unbelievably crude preparations contain much non-specific and even non-antigenic matter. The active principal (the venom) may not even be present. Since there is no quality control over the amount or kind of venom present in these extracts, it is not surprising that specific immunologic therapy using these crude preparations is often ineffectual.

Not only is there much cross reaction to these crude extracts, but many non-allergic people show skin reactions against them. Ideally, individual venoms from specific insects should be available for diagnostic testing, but apparently these have not yet been approved for general use. Specific immunologic therapy with such venom has been described in a child from a bee-keeping family who had previously undergone therapy using whole-insect body extracts.[8] This same family had already lost one child from bee sting anaphylaxis in spite of similar therapy. It was shown that in the venom-desensitized child, a significant level of blocking antibody was indeed built up to the point that the child safely withstood an actual, subsequent bee sting without symptoms while under close supervision in a hospital setting. At present, most allergists have no alternative but to continue whole-body extracts for immunologic therapy, but it is hoped that specific venom antigens will become available in the near future.

Lewis H. McConnell, M. D., Clinical Assistant Professor and Allergist, Charleston Area Medical Center.

Although there may be 200 species of insects in West Virginia capable of stinging or biting man, our major concerns are the honey bee, yellow jacket, hornet and wasp. Increasing case reports are appearing concerning the fire ant in the South, which are well documented as a cause of death or anaphylaxis, but they do not concern us in this area. There are occasional reports cerning other insects, but they are usually not well documented. The Hymenoptera caused 400 known deaths in the U. S. in the 10 years prior to 1973 and cause perhaps as many as 80 deaths per year, some of which are not recognized to be due to bee stings.

We should mention the prostaglandins and the kinins in regard to the chemical mediators of anaphylaxis, which may arise upon secondary reaction of their initiating systems rather than primarily from an antigen-antibody interaction. The kinins may play a role in man in the picture of vascular collapse unaccompanied by other signs or symptoms of anaphylaxis, and in the so-called protracted shock syndrome in the guinea pig. Serotonin, of course, has no known role in man.

No specific mention was made in relation to the cardiac system in anaphylaxis, except in the case presented. Electrocardiographic changes do occur, consisting of flattening and inversion of T waves, ST elevation or depression, premature ventricular contractions, and arrhythmias such as junctional rhythm and atrial fibrillation. These changes are felt by many investigators to be

related to the anaphylaxis itself, and not to treatment or to underlying coronary artery disease. Myocardial infarction does occur, but it is usually in older individuals who already have coronary atherosclerosis.

As it was pointed out in the discussion, the question of whole-body extract versus specific venom therapy has been a problem for a number of years. I feel that the statement that treatment with whole-body extract has met with limited success may be misleading, because in clinical practice we are able to observe individuals who have had severe systemic reactions from stinging insects and who have had little or no reaction when re-stung after treatment using whole-body extract. There are instances, however, where such treatment has failed to be effective.

The current recommendation for whole-body extract therapy is to continue the injections for the lifetime of the patient, but once a maintenance dosage is reached, an injection usually need be given only once a month. The total dosage is not known for venom therapy, but it is also suggested that those individuals not regularly exposed to stings will need to undergo treatment for their lifetime. I do not think anyone would argue that venom would be the treatment of choice, but not only has it not been approved, it is not available from commercial sources.

Finally, I would like to comment on the speed with which death is likely to occur from the sting of the Hymenoptera. In 100 autopsied cases[10] where the time of the sting was known, 59 per cent died within 60 minutes. Nine per cent of the cases died more than 96 hours following the sting, but there were cases with complications—either neurological or from septicemia—which are not uncommon. Fortunately, the majority of those stung receive fairly prompt, correct treatment for their reactions and suffer no sequelae. There has been one recorded death in two minutes where the sting apparently entered directly into a venue.[11]

Edmund B. Flink, M. D., Professor and Chairman, Department of Medicine, West Virginia University Medical Center.

I think it should be emphasized that epinephrine is the best agent for the treatment of anaphylactic reaction. Epinephrine may be used intravenously in appropriate dilutions: 0.4 mg. in 10 ml. saline directly IV or into an established saline infusion, or epinephrine diluted in saline calculated to deliver 0.5 mg. epinephrine every 15 minutes. Epinephrine is preferable to metaraminal (Aramine) or norepinephrine since a beta adrenergic agent is needed. In the United States the death rate from insect bites (particularly Hymenoptera) is greater each year than that due to snake bites.

A Physician:

What effect would the fact that a patient is taking propranolol have on the treatment of anaphylaxis?

Doctor Brown:

This situation has not been completely evaluated. Ideally, epinephrine should not be used until after the effects of propranolol have disappeared or about six hours after oral administration. Kram, Browne et al[12] recently showed that marked bradycardia and atrioventricular block can occur after intravenous infusion of epinephrine in a patient on oral propranolol. This presumably occurs because the normal vagal slowing of the heart in response to the increased blood pressure, secondary to epinephrine, is accelerated by the beta blockade of propranolol. Thus, I would think that this could be corrected with one to two mg. of atropine, and then epinephrine could be given in normal or increased doses.

Suggested Reading

1. Marks, M. B.: Stinging Insects: Allergy Implications. Ped. Clinics N. Amer. 16:177-191, 1969.
2. Torsney, P. J.: Allergic Reactions to Insect Stings. New York J. Med. 68:2765-2768, 1968.

A list of references may be obtained by writing The Journal.

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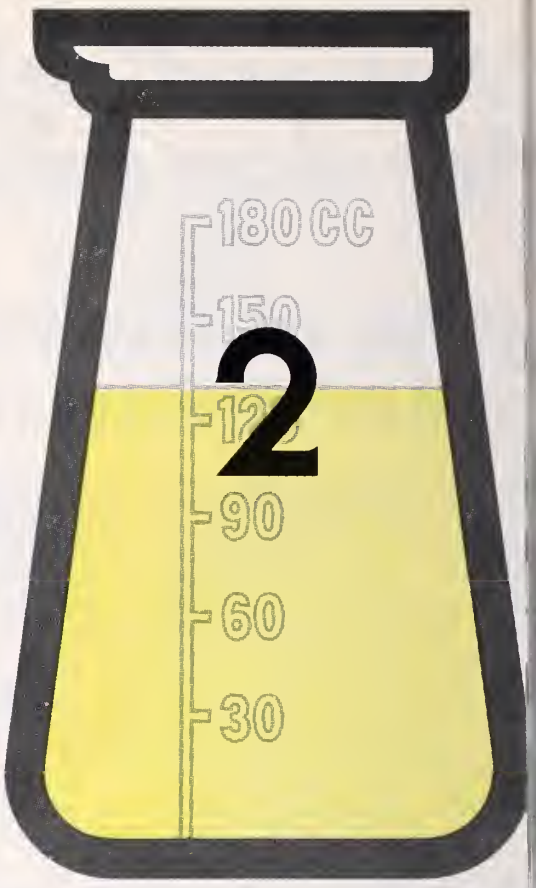

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Warnings: Safety during pregnancy has not been established. Sulfonamides should not be used for group A beta-hemolytic streptococcal infections and will not eradicate or prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent CBC and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis); *CNS reactions* (headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon). Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thyroid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose should not exceed 75 mg/kg/24 hrs.

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Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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A message from . . .

The President

INERTIA — THY NAME IS PRESIDENT ELECT

This is near truth until the Executive Secretary abruptly, but in good taste, informs the President Elect that an editorial needs to be written prior to the Annual Meeting.

You now add the adjective "editorial" and come up with "editorial inertia." This is an affliction of a State President, whose job description requires him to spew forth a page at regular intervals. It's a professional affliction, resulting in one quietly resting one's forehead on the typewriter keyboard, tapping one's fingernails against the coffee table, and fitfully wondering if the Muse is a vanishing species. The ailment is aggravated by deadlines and fed by desperation.

From "editorial inertia" has developed a form of writing that is: (a) a real cop-out; and (b) successful on very rare occasions. It amounts to stringing together an unrelated mish-mash of thoughts, observations and "things I wish I'd said, but somebody else already did."

Enough for inertia. It has been said in previous editorials that I would indeed be on the "firing line" in 1975-76. This is just a nice way to tell me to shape up and get ready for action.

I look forward with mixed emotions to being on the "firing line" for our organization, but a single shot ne'er won the war. We will need many active guns of our Federation to overcome our adversaries and to preserve our present mode of living — our present mode of respectful and dedicated patient care.

Allow me to take this opportunity to convey in writing my thanks for the likes of Bill Gilmore who has been most outstanding, an inspiration to those of us who served with him, and a glowing example of what our Association's President should be when the chips are down.

Jack Leckie, M. D., *President*

Jack Leckie

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EDITORIALS

CARCINOMA OF THE PANCREAS

Attention has been called to the increasing frequency of cancer of the pancreas (*Quarterly Report of Tumor Clinic and Registry*, West Virginia University Medical Center, October, 1974). The etiology of this condition is unknown. The report included 121 patients with a diagnosis of pancreatic carcinoma; there were 68 males and 53 females. The highest age incidence was in the 61-70 age group and the next highest in the 51-60 age group. The youngest patient in the registry was 38 years of age and the oldest 89. It is noteworthy that only 13 per cent of these patients presented only localized disease, whereas 40 per cent had a regional involvement and 47 per cent had distant metastases.

The recognized treatment is surgical removal of the growth with surrounding normal tissues and regional lymph nodes. Generally local extension of the tumor or distant abdominal metastases will be found in those patients who have cancer at the head of the pancreas. In this event, surgical resection often is technically impossible or therapeutically unjustified. In this report 55 per cent of the patients received no surgical treatment due to the extent of their disease. Twenty-two patients underwent surgical resection and of these, 15 received palliative surgery and 11 per cent curative surgery.

Chemotherapy is presumably of some aid in instances of widely disseminated carcinoma. It is not of any particular value in patients who have carcinoma at the head of the pancreas.

The five-year survival figures for this relatively small group are not encouraging. Suffice it to say that of the four patients with regional involvement, two survived the five-year period; one had received no treatment. Of the 57 patients who had remote metastases one was still alive at the 89th month; he had also received no treatment.

Obviously, early diagnosis of cancer of the pancreas is highly desirable, but this is generally a difficult assignment. The most frequent first symptom is, as a rule, pain, but it is not necessarily diagnostic, since it may vary in character and in location. Certain laboratory tests may be helpful. The next most common symptom is jaundice, which condition often causes a patient to seek medical aid. Unfortunately many patients have either a regional involvement or have distant abdominal metastases when jaundice develops. The prognosis is therefore grave. At present it appears that the natural course of the disease, that is, swift progression to death after onset of symptoms, is uninfluenced by any surgical procedure except radical extirpation of the pancreas in the very early suitable cases.

Elsewhere in this issue, we publish a lawyer's viewpoint of the current malpractice crisis. Each of us needs to read it carefully, for it is apparent that the legal and medical professions need to work more closely in the attack on society's problems. This article could easily prove to be a cornerstone in building a successful and much needed relationship.

PROBLEM SOLVING REQUIRES COOPERATION

If we begin with President Gilmore's admonishment to us in the July issue of this *Journal*, and recognize that our Medical Association is acting toward the objective of better discussion with the legal profession and our insurance carrier, we will be progressing to betterment. Committees have been formed and are meeting in review of pending claims. Perhaps more meetings between local medical societies and local organizations of attorneys should be held to aid in the quest for solutions to our problem. Meetings of this type should be helpful to the Legislature in the development of appropriate new statutes.

Time is running out. Our Medical Association has at least two more years of insurance coverage available to us. Meanwhile, let's try to improve our prospects for the future.

Is cancer of the colon a cause of psychiatric illness?

A SURVEY OF COLOSTOMY PATIENTS

A colostomy is not always a precipitating cause of an emotional illness following a diagnosis of cancer of the colon, but 20 per cent of the cases reviewed showed some emotional difficulty.

What has caused the large number of psychiatric consultations in colostomy patients? Is it due to the change in the patient's body image? The colostomy is recognized as being a disfigurement seemingly such as the mastectomy and hysterectomy. Is it due to body chemical imbalance? Is it due to a grief factor associated with the realization that they have a terminal illness—cancer of the colon?

In the years between 1971 and 1974 there were 65 cases diagnosed as cancer of the colon in St. Mary's and Cabell Huntington hospitals in Huntington. These patients ranged in age from 41 to 93. There were 31 males and 34 females. Of these, 13 had major psychiatric complaints: three were diagnosed depressive neurosis; three showed psychotic manifestations; one developed epilepsy; and six became so nervous and anxious that they required tranquilizers. Twenty per cent of the cases showed less serious psychiatric problems.

The presenting complaints were anemia (12 cases); abdominal pain (12); rectal bleeding (7); diarrhea (6); weakness (5); weight loss (4); loss of appetite, intestinal obstruction and headache (3); and constipation, dizziness and psychosis (1). Change in bowel habit was noted in one patient who had it immediately investigated since his father had had cancer of the colon.

Ten of these cases had normal lab in a complete work-up. Alkaline phosphate ranges were from normal to 350, CPK up to 220, LDH 600, and SGOT 150.

The surgical procedures they had were 18 resections of the colon, 18 transverse colostomies, 14 resections of the sigmoid colon, nine right colostomies, four left colostomies, one resection of the descending colon, one Meckelity colostomy, and one loop colostomy.

Why the large number of psychiatric syndromes? Is it due to a change in body image, or is it associated with importance of the GI tract? Is it associated with desires and gratification and the experiencing of pleasure and displeasure during the first years of life which are largely centered in the GI tract—only to return with age to worrying about the "daily" bowel elimination? Feelings of trust and being loved are initially experienced in being fed. The site of gratification gradually shifts to the other end of the alimentary canal and the feces. The process of retention and expulsion gives man a feeling of autonomy of accomplishment of possessiveness, of shame and doubt and of rebellion.[1]

The GI system is a common site for expression of a wide range of emotional delusional ideas and may involve the stomach and bowel in schizophrenia and the depressive psychosis.

One of the most vivid pictures a patient painted for me was of the disfigurement of her body with her colostomy. She felt she was dirty, in spite of changing her pad after each emptying of the colostomy. She felt people were smelling her and turning away from her. She had moved out of her home because she felt she was too repulsive to have intercourse with her husband. She was a severe example of the psychosis associated with bowel surgery. There is a 20 per cent chance of a psychiatric complication following colostomy. Surgeons should be on the lookout for emotional complications in the colostomy.

A study of women 20 to 55 years of age who had upper abdominal or pelvic operations and who were without psychiatric complaints or any discernible disease of the nervous system at the

time of operations indicated that the rate of postoperative disturbances is higher after colostomy than after cholecystectomy. Postoperative disturbance, however, was much more common among patients who had depressive episodes at an earlier time in their lives. The latter experienced depression, hysteria, psychopathic deviancy, psychoasthenia, schizophrenia and social introversion.[2]

From Birmingham, England, psychological testing of patients having had colostomies were given tests including Depression Rating Scale, Eysenck Personality Inventory, 16 Personality Factor Questionnaire Scale of Obsecesssional symptomoloty overall scale of adjustment. All patients showed high level of depression. The patients, whose mean age was 64.7 years, were anxious about odor from colostomy. Their chief complaints were: weight loss, constipation, back pain, neuralgia and occasional diarrhea.

Depression seemed to be the principal complaint of our patients.

Dr. John Prudden wrote about the personal feeling of well being associated with conquering the fear of spillage, sexual inadequacy or undesirable odor or embarrassment in certain settings: "One of the more surprising findings is the extent of self condemnation and fear or rejection about odors from feces."[3]

Other patients develop a dependence toward their surgeon and require his strength in order to withstand the insult on their independence.[4]

The psychiatrist may be a very important adjunct therapist for the patient who has had a colostomy. The addition of antidepressants, tranquilizers and electroshock therapy may become part of their treatment.—*Guest Editorial by Florence K. Hoback, M. D., 1309 16th Street, Huntington, West Virginia.*

1. American Handbook of Psychiatry, Editor, Silvano Arieti, Basic Books, Inc., New York, pg. 678.
2. Brown, R. S.; Haddox, Victor; Posada, Alejandro; Rubio, Antonio; Social and Psychological Adjustment Following Pelvic Exenteration. American Journal of Obstetrics and Gynecology 114:162-177.
3. Pryse, Phillips, William, Follow-Up Study of Patients and Colostomies, American Journal of Surgery 122:27-32, July, 1971.
4. Prudden, John F., Psychological Problems Following Iliostomy and Colostomy. Cancer 28:236-238, 1971.

CONTINUING EDUCATION AND RECERTIFICATION

Time moves faster than we anticipated and, to many of us, is accelerating quite rapidly as 1976 and the first mandatory recertification examination in medical history — that of the American Board of Family Practice—approaches. To those who are scheduled to participate in this historic event, the prospect may seem a bit grim. In truth, the eventual satisfaction of having contributed to a major occurrence in the history of medicine will far outweigh the anxieties and efforts involved in preparation for and participation in recertification.

Before pursuing this point further, it is best that I review, briefly, the real purpose of Board Certification in an area of medicine. In spite of misuse and abuse of the concept of Board Certification in granting hospital privileges, this is not the reason for its existence. Accomplished goals of certification include: (1) increased quality of education in the graduate (residency) programs, (2) improved standards of practice in the area of medicine, whether all are diplomates or not, and (3) recognition of those young physicians who have taken special training.

In 1916, the American Board of Ophthalmology became the first certifying board. Since that date, there have been created and recognized 22 Primary Specialty Boards. With their stimulation and under their guidance, graduate education programs have reached a zenith and the American public may feel secure in the fact that young physicians leave the mainstream of organized medical education well equipped.

During the past five years, postgraduate, or continuing, education has proliferated a thousand fold. Some of this postgraduate education has been excellent, some good, some very mediocre, and some unbelievably bad.

Ophthalmology was the first actively and vigorously to support the concept that graduate education must be of good quality and must be stimulated toward constant improvement. Family Practice, with its mandatory recertification provision, is the first to advocate and support this concept for postgraduate education.

Development within each certifying board of a special division for the express purpose of recertification and stimulation of quality postgraduate education is certain to follow.

The 1970 class of diplomates of the American Board of Family Practice will, in the future, be proud that they have participated in such an event in history and, in fact, have made it possible.—*Guest Editorial by George E. Burket, Jr., M. D., President, American Board of Family Practice.*

Truth is so hard to tell, it sometimes needs fiction to make it plausible.

Dagobert D. Runes

GENERAL NEWS

Dr. James H. Sammons To Address Mid-Winter Conference

James H. Sammons, M. D., Executive Vice President of the American Medical Association, will be a special guest speaker during the Ninth Mid-Winter Clinical Conference next January in Charleston, it was announced by Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, Co-Chairmen of the Program Committee.

James H. Sammons, M. D.

The conference will be held January 30, 31 and February 1 at the Daniel Boone Hotel.

Doctor Sammons will speak at a physicians' session at 8 P. M. on Friday, January 30. He will address major contemporary issues confronting medical societies and the medical community.

The continuing education event is sponsored by the State Medical Association in conjunction with other medical groups and volunteer health agencies. Serving on the Program Committee with Drs. Nestmann and Skaggs are Drs. William O. McMillan, Jr. of Charleston and C. Carl Tully of South Charleston.

A former Baytown, Texas, family physician, Doctor Sammons was elected Executive Vice President Designate of the AMA in March, 1974, and was elected Executive Vice President in October, 1974. He previously had served as the Chairman of the AMA's Board of Trustees.

Doctor Sammons, who was the youngest member of the AMA Board of Trustees, was elected to the Board in 1970 and re-elected to serve an additional three-year term in 1973.

Born in Montgomery, Alabama, Doctor Sammons did his undergraduate work at Washington and Lee University, and received his M. D. degree from St. Louis University School of Medicine. He interned at Mobile City - County Hospital in Mobile, Alabama. Until moving to Chicago, he was a managing partner of a 10-member multi-specialty fee-for-service group practice in Baytown.

Doctor Sammons was a member of the Board of Directors of the American Medical Political Action Committee (AMPAC) from 1964 to 1970, and Chairman in 1969-70. He also was a founder of the Texas Political Action Committee (TEXPAC).

He served as Delegate and Vice Chairman in the Texas delegation to the AMA House of Delegates. Doctor Sammons, extremely active in the Texas Medical Association, was its President in 1971-72 and served for 15 years as a member of its Executive Board. Doctor Sammons also was active in the TMA through the East Harris County Branch of the Harris County Medical Society, in which he held all elected offices. In addition, he served for six years as President of the Houston Academy of Medicine.

Other professional memberships include the Southern Medical Association, in which he is a past Vice-Counselor; Harris County Academy of General Practice; Texas and American Academies of Family Physicians; Phi Chi Medical Fraternity, and Kappa Alpha Fraternity. Doctor Sammons is Clinical Assistant Professor in the Department of Community Medicine and Clinical Associate Professor of Family Medicine, Baylor College of Medicine.

Conference Schedule

The conference will begin Friday afternoon, January 30, and conclude at noon on Sunday, February 1. Scientific sessions will be held Friday afternoon, Saturday morning and afternoon, and Sunday morning. There will be concurrent sessions on Friday evening—a public session on dyslexia and the hyperactive child; and the physicians' session to be addressed by Doctor Sammons. A medically-oriented session on dyslexia for physicians, featuring the same speaker, is scheduled for Saturday morning.

Physicians, wives and guests will be invited to attend the annual dinner dance of the Kanawha Medical Society Saturday evening at the Daniel Boone.

The subjects of the acute abdomen and GI bleeding will be discussed during the Friday afternoon session. Tentatively scheduled are scientific papers on the topics of dermatology, gynecology and otolaryngology Saturday afternoon; and diabetes, nonoperative orthopedics and urology Sunday morning.

Additional details, including Conference speakers, will be provided in later issues of *The Journal* as the program is completed.

New Class Of All State Residents Enters WVU Medical School

An 84-member first-year class composed entirely of West Virginians entered the West Virginia University School of Medicine when the first semester began on August 25.

Eigteen women, the largest number ever admitted in one year to the School of Medicine, are included in the new class.

The 84 students come from 23 counties in the State. Kanawha County is home for the largest number—15. Monongalia has 11 and Cabell County, 10.

Those admitted completed their undergraduate education at 32 different institutions—42 were students at WVU, 19 attended Marshall University or colleges in West Virginia, and 23 attended out-of-state colleges or universities.

Selection of the new class was again a difficult task for the 12-member Committee on Admissions. More than 1,600 inquiries were received and acknowledged. Applications were sent to 398 West Virginians and 367 non-residents. Interviews were granted to 316, including 274 West Virginians and 42 non-residents.

The grade-point average for the accepted candidates this year was 3.48 (4.0 is perfect—all A's), with a science average of 3.47.

Members of the class include:

BARBOUR COUNTY—Mickey Jon Neal and Patricia Carol Treharne, Philippi.

BROOKE COUNTY—Rosemarie Elizabeth Cannarella, Follansbee.

CABELL COUNTY—Mary Simon Boyd, James Peele Carey, Carolyn Edwards Clark, Joseph Jordan David, William Jefferson Lester, Carl Frederick McComas, Thomas Wilson Noel, Joseph Andrew Sheppe, Douglas Charles Wolf and Brian Frederick Wroczynski, all of Huntington.

FAYETTE COUNTY—Carl Gregory Bowling, Oak Hill.

GRANT COUNTY—David Lee Jordan and George Benjamin Moomau, Petersburg.

HANCOCK COUNTY—Thomas Michael Przybysz, Robert Joseph Pusateri, Georgianna Tsekouras and Edward Michael Zagula, all of Weirton.

HARRISON COUNTY—Stephen Harper Cooksey, Donald Wayne Fennell, Michael Roy Martz, Doyle Russell Sickles and Cathy H. Traugh, all of Bridgeport.

JACKSON COUNTY—Patricia Ann Morgan, Ravenswood.

JEFFERSON COUNTY—Martin Winston Ruiga, Shepherdstown.

KANAWHA COUNTY—Thomas Richard Douglass, Peter Raymond Edelman, Rebecca Logan Galford, Richard Lewis Garrison, Gregory David Gibbons, Roland Edward Hamrick, Jr., Elizabeth Ann Mooney, Robert David Tarver and Edward Henry Tiley, III, all of Charleston; Samuel Don Hensley, Jr., Dry Branch; Stephen Lee Bower and Jane Elizabeth Kosa, Dunbar; Lawrence Bennett Kelly, St. Albans; and Jane Claire Gerke and Stephen Eugene Perkins, South Charleston.

LOGAN COUNTY—Kim John Chillag, Holden.

MARION COUNTY—Thomas Anthony Alberico, Rebecca Jane Lindsay, Jeffrey Lynn Neely, Maurice David Prendergast and Robert A. Rambola, all of Fairmont.

MASON COUNTY—Robert Allen Kayser, Jr. and Dennis Ivan Pullins, Point Pleasant.

McDOWELL COUNTY—Melinda Charlene Mullins, Davy.

MERCER COUNTY—James Morgan Kyle, Athens; and Dennis Richard Perenyi, William Karnes Poston, Jr. and George Wilson Vick, II, all of Bluefield.

MINERAL COUNTY — Jeffrey Bright Young, Burlington.

MONONGALIA COUNTY — Matthew Barton, Marc Charles Friedman, Peter Charles Gleason, James Drew Gloor, Martha Hales, Elizabeth Ann Johnson, Samuel Martin Mahaffey, Keith Janes Popovich, Thomas Darius Roberts, Linda Stokely Yazvac and Bernard Zimmerman, III, all of Morgantown.

OHIO COUNTY—William Matthew Bennett, Marilee Benson, John Dubois Holloway, Michael Albert Kress, William Carl Mercer, Konrad Charles Nau and David Mark Perilman, all of Wheeling.

PRESTON COUNTY—Evelyn Walker Manetta, Independence; and Claude Kennard Shannon, Tunnelton.

PUTNAM COUNTY—Howard James Stanton, Eleanor.

RALEIGH COUNTY—Randolph Jack Canterbury, II, and Richard Alan Vaughan, Beckley; and James Michael Wills, Rock Creek.

TAYLOR COUNTY—Howard Arthur Stansberry, Grafton.

WOOD COUNTY—Michael Stephen McIntosh, Parkersburg; and Francis Michael Cyran, Vienna.

Convention Story Will Appear In October Journal

The 108th Annual Meeting of the West Virginia State Medical Association was being held at The Greenbrier in White Sulphur Springs as this issue of *The Journal* went to press.

The full convention story, including information concerning new officers of both the State Medical Association and Auxiliary, as well as heads of sections and affiliated societies and associations, will be carried in the October issue.

Plans Complete For Ob-Gyn Workshop In Huntington

Plans are complete for the Fourth Annual Clinical Workshop in Obstetrics and Gynecology, a combined program for physicians and nurses, to be held Friday and Saturday, September 26-27, at the downtown Holiday Inn in Huntington.

Robert C. Parlett, M. D.

Sponsors are the West Virginia Obstetrical and Gynecological Society, the West Virginia Section, District IV, American College of Obstetrics and Gynecology, and the West Virginia Section, Nurses Association American College of Obstetrics and Gynecology (NAACOG).

Two nurses' postgraduate courses will be held on Friday, September 26, from 8:30 A. M. to 5:30 P. M. Physicians' sessions will begin at 12:45 P. M. on Friday with welcome and announcements by Gary G. Gilbert, M. D., of Huntington, Program Chairman.

Robert P. Pulliam, M. D., of Beckley, President, will preside at a business meeting of the West Virginia Obstetrical and Gynecological Society at 5:30 P. M. Friday, while Norma Church, R. N., of Wheeling, President, will be in charge of a business meeting of NAACOG, West Virginia Section, at the same time. A dinner dance will follow, with Robert C. Parlett, M. D., Dean of the Marshall University Medical School, scheduled as the dinner speaker.

A combined session for physicians and nurses will begin on Saturday with breakfast table conferences from 7:30 to 8:30 A. M. The combined session will continue following breakfast.

The workshop, which will conclude at 1 P. M., has been approved for continuing medical education credit by the American College of Obstetrics and Gynecology, ACOG-NAACOG, and the American Academy of Family Physicians. Credit also has been requested for Category 1 of the Physician's Recognition Award of the American Medical Association, and the West Virginia Nurses Association.

The scientific program and speakers were announced in the August issue of *The Journal.*

The physician registration fee will be $40. The nurse registration fee (for nurses not attending the postgraduate courses on Friday) will be $20 for NAACOG members, $30 for non-members. The fee includes the Saturday breakfast conference and the Friday evening cocktail party and dinner dance. Spouse tickets for the dinner dance are $7.50.

For additional information contact one of the Program Coordinators, Gary G. Gilbert, M. D., of Huntington, or Diane Kopical, R. N., Charleston Area Medical Center.

WVU's ENT Library Dedicated To Dr. Sobisca S. Hall

In honor of the first otolaryngologist in West Virginia to perform an operation to restore hearing, the library of the Division of Otolaryngology, West Virginia University School of Medicine, was named the Sobisca S. Hall Library at a dedication ceremony this summer.

"Doctor Hall has had every honor the State of West Virginia can give," said Dr. Philip M. Sprinkle, Professor and Chairman of Otolaryngology. "It is most fitting that this library be named in his honor and will perpetuate his influence on medicine in the State of West Virginia. He was doing things in 1933 people are just beginning to do now. He is a man of impeccable honesty and set an example for the entire State."

Doctor Hall, who practiced in several northern West Virginia communities and was in Clarksburg at the time of his retirement in 1969, was also Clinical Professor of Otolaryngology at WVU during 1968 and his last year of practice.

A native of Horner (Lewis County), Doctor Hall worked as a fireman on the B & O Railroad to put members of his family through school before going to Rush Medical College of the University of Chicago where he received his M. D. Degree.

He trained with leading American physicians in his specialty, including Chevalier Jackson, Samuel Forman and Julius Lempert.

He has had two tours of duty with the armed forces of the United States, serving as an assistant surgeon with the Navy in 1925, and with the Army from 1942-1945 with the rank of Lieutenant Colonel. In 1945 he was awarded the bronze star for meritorious support of combat operations against the enemy in New Guinea. Upon retirement from active duty, he was given the commission of Colonel in the United States Army Reserve.

He also served for two years with the Selective Service System.

Leading his contemporaries with his innovative approach to ear, nose and throat problems, Doctor Hall performed the first endaural mastoidectomy, the first planned fenestration and the first laryngectomy for cancer in West Virginia.

The recipient of a Physician's Recognition Award by the American Medical Association, he was also awarded a particular case records prize in 1933 which cited the outstanding quality of his records and patient care. This award was made by the American College of Surgeons.

Certified by the American Board of Otolaryngology in 1934, he is a Fellow of the American Academy of Otolaryngology, a member of the American Academy of Facial Plastic and Reconstructive Surgery, a Fellow of the American College of Surgeons, and a member of the American Bronco-Esophagological Association.

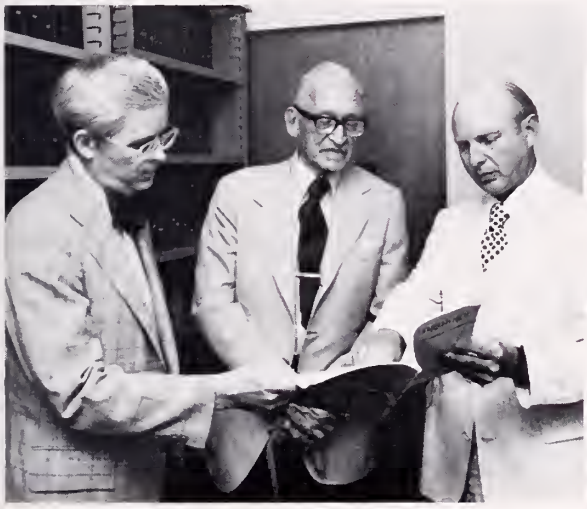
He served as President of the West Virginia Academy of Ophthalmology and Otolaryngology in 1948 and as President of the West Virginia State Medical Association in 1952.

Named a Fellow of the Southeastern Surgical Congress in 1939, he is also a member of the American Council of Otolaryngology, the American Medical Association, the Pan-American Medical Association and the Pan-Pacific Surgical Association.

Doctor Hall is the author of numerous articles in state and national journals and has contributed to other publications and books.

The Sobisca S. Hall Library consists of approximately 1,000 volumes as well as library journals and audio-visual aids. Much of it represents the collection of Doctor Hall and was donated by him to the Division of Otolaryngology.

The inscription on the plaque which was placed at the entrance to the library upon its dedication ends with a quotation from Tennyson: "Knowledge Comes but Wisdom Lingers."



Dean John E. Jones, M. D., of the West Virginia School of Medicine, Dr. Sobisca S. Hall, retired Clarksburg otolaryngologist, and Dr. Philip M. Sprinkle, Professor and Chairman of Otolaryngology (from left), check through one of the journals included in the recently dedicated Sobisca S. Hall Library in the Division of Otolaryngology at the WVU Medical Center. Most of the library consists of the books and journals given to the University by Doctor Hall, a pioneer and innovator in the treatment of diseases of the ear, nose and throat in West Virginia.

Program Announced For State Heart Association Meeting

The program has been completed for the 1975 Annual Meeting and Scientific Session of the American Heart Association, West Virginia Affiliate, to be held September 25-27 at the Lakeview Inn and Country Club in Morgantown.

Registration will be held in the Lakeview Club House from 8 to 10 P. M. on Thursday, September 25, and will continue on Friday, beginning at 8

Leo H. T. Bernstein, M. D.

George Khoury, M. D.

A. M. Scientific exhibits will be on display in the hallway of the Conference Center on the main level, beginning at 8 P. M. Thursday and continuing throughout the meeting.

The Annual Meeting will open with a General Assembly beginning at 9 A. M. Friday, September 26. Dr. Leo H. T. Bernstein of Martinsburg, President, will make opening remarks; and Dr. George Khoury of Morgantown, President Elect, will deliver the keynote address.

Following a business session and a break for scientific and non-medical sessions, an Awards Luncheon will be held at 1 P. M. The speaker will be Jack Kley, M. D., Chairman of the American Heart Association's Mid-Atlantic Regional Heart Committee.

The assembly will reconvene from 4 to 5 P. M. for installation of officers. The president's reception will begin at 6 P. M., followed by the annual membership dinner banquet. Dr. Robert J. Marshall, Director, Division of Cardiology, West Virginia University School of Medicine, will speak on "Cardiology in Two Continents" during the banquet.

Non-medical and scientific sessions, as noted, will begin at 10 A. M. on Friday and conclude at 1 P. M. The scientific speakers and their topics are:

"Current Art of Echocardiography"—Allen Bowyer, M. D., Professor of Medicine, WVU; "Clinical Application of Echocardiography"— William H. Carter, M. D., Charleston, Practicing Cardiologist;

"Cardiac Graphics-Clinical Value"—John Schwalback, M. D., WVU; "Diagnostic Value of the Stress Electrocardiogram"—Abnash C. Jain, WVU;

"Management of Cardiac Shock"—Harold Selinger, M. D., Charleston, Practicing Cardiologist; and "Cardiac Rehabilitation"—Leslie McCoy, M. D., Charleston, Assistant Director, West Virginia Department of Vocational Rehabilitation.

Betty Brown, R. N., Chairwoman of the State Nursing Committee, will preside at the non-medical session; with welcome and introductions by William Neal, M. D., President of the Monongalia County Heart Unit. The speakers and their topics will be:

Harold Selinger, M. D.

Robert J. Marshall, M. D.

"Cardiopulmonary Resuscitation in West Virginia"—Richard Knapp, M. D., Chairman, Department of Anesthesiology, WVU; "The Essence of CPR"—Lynn Ostrow, R. N., WVU;

"Practice Session in CPR"—Sue Mullenex, R. N., WVU; and "Exercise and Your Heart"—Mary Frances Borgman, R. N., WVU.

The meeting has been approved for three hours of credit in Category 1 by the West Virginia Chapter, American Academy of Family Physicians.

W. Va. Chapter, ACS, To Meet Nov. 7-8 In Morgantown

The West Virginia Chapter of the American College of Surgeons will hold its annual fall meeting November 7 and 8 at the West Virginia University School of Medicine and Lakeview Inn in Morgantown, it was announced by Dr. Alvin L. Watne of Morgantown, Secretary-Treasurer.

The meeting will be held in conjunction with the Department of Surgery and will be a continuing education course.

Dr. Henry Bahnson, Professor and Chairman of Surgery at the University of Pittsburgh, will be guest speaker. The topic of the program will be "Aorto-Iliac Disease."

Doctor Maliska Heads New State Emergency Physicians Chapter

Dr. Jerry A. Maliska of Charleston has been elected the first President of the West Virginia Chapter of the American College of Emergency Physicians. Doctor Maliska was elected during a recent organizational meeting in Charleston. Also elected were Drs. Ronald M. Cyphers of Princeton, Vice President; and George D. Duffield, Charleston, Secretary-Treasurer.

The first official meeting of the West Virginia Chapter was to be held during the 108th Annual Meeting of the State Medical Association, August 20-23, at The Greenbrier in White Sulphur Springs.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Sept. 20—Diseases of the Peripheral Vascular System (PG Course), Huntington.

Sept. 21-24—Am. Assn. of Electromyography and Electrodiagnosis, Rochester, Minn.

Sept. 21-25—Am. Acad. of Ophth. & Otol., Dallas.

Sept. 21-26—Kentucky Medical Assn., Louisville.

Sept. 24-28—Am. Acad. for Cerebral Palsy, New Orleans.

Sept. 25-26—Med. Society of D. C., Washington, D. C.

Sept. 25-27—Am. Heart Assn., W. Va. Affiliate, Morgantown.

Sept. 26-27—Clinical Workshop In Ob.-Gyn., Huntington.

Sept. 30-Oct. 3—Am. Roentgen Ray Society, Atlanta.

Oct. 1-3—W. Va. Hospital Assn., White Sulphur Springs.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 23-26—Med. Society of Virginia, Roanoke.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 7-8—W. Va. Chapter, ACS, Morgantown.

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

1976

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

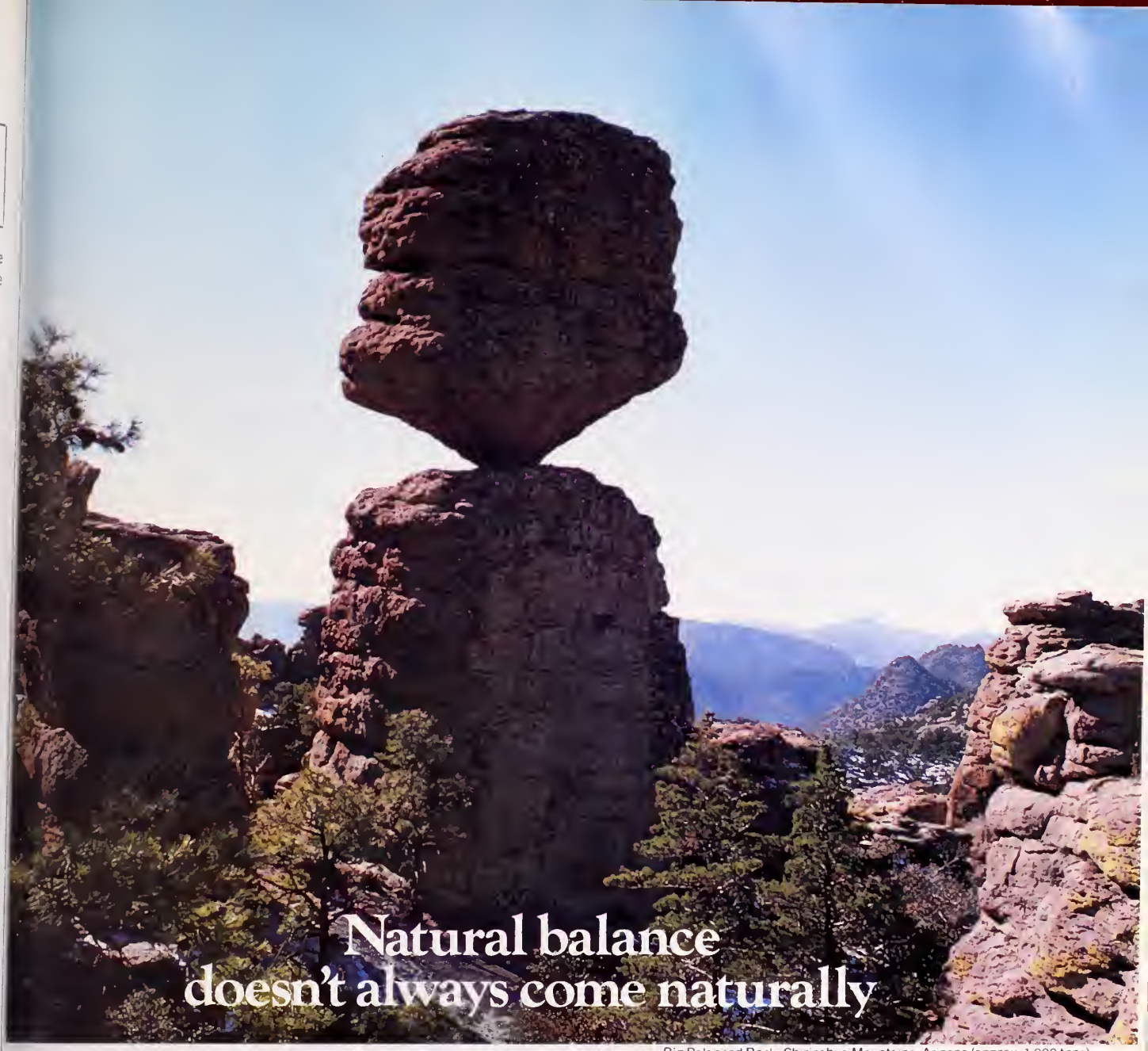
Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 26-29—Am. College of Surgeons, Boston.

June 26-July 1—AMA Annual Meeting, Dallas.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

Found useful in the management of vertigo* associated with seases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

Also available as Antivert (meclizine HCl) 12.5 mg. scored ıblets, for dosage convenience and flexibility.

Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for ausea, vomiting and dizziness associated with motion sickness.

RIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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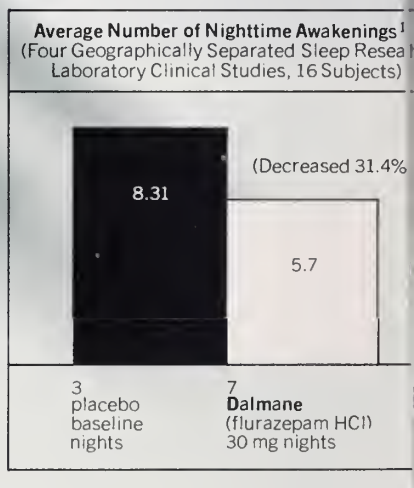
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

Would sleep wi fewer nighttime awakenings benefit your patients with insomnia?

Highly predictable results for your patients with trouble staying asleep...

...can be obtained with Dalma (flurazepam HCl). As shown below, Dalmane significantly reduces nighttime awakenings:[1]



And for those with trouble alling asleep or sleeping ong enough...

...Dalmane (flurazepam HCl) lso delivers excellent results. linically proven in sleep research aboratory studies: on average, leep within 17 minutes that lasts to 8 hours.[5]

Dalmane (flurazepam HCl) s relatively safe, seldom causes morning "hang-over"...

...and is well tolerated. The usual adult dosage is 30 mg *h.s.*, but with elderly and debilitated patients, limit the initial dose to 15 mg to preclude oversedation, dizziness or ataxia. Evaluation of possible risks is advised before prescribing.

REFERENCES:

1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971
2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th annual Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971
3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
5. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Depend on highly predictable results with

Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

specifically indicated for insomnia

Objectively proved in the sleep research laboratory:

- **sleep with fewer nighttime awakenings**
- **sleep within 17 minutes, on average**
- **sleep for 7 to 8 hours, on average,**

with a single *h.s.* dose.

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Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called patie package insert has been around f a long time. Many physicians alre use written instruction sheets to provide patients with information about the drugs they are taking. A some physicians give verbal instr tions; but in too many instances these are what I call eye-glazing e ercises. I have seen patients sit wi glazed eyes listening to a rapid-fir lecture by a hurried physician wh has 20 people out in his waiting room. These patients aren't given sufficient understanding and ther fore do not follow instructions. So think the idea of an official packag insert for patients is a good one. Perhaps we should really think of this kind of information simply as extension of drug labeling.

The benefits of patient involvemen

Many physicians may not rea ize how frequently a patient obtair his drug information from Aunt Tillie or the next door neighbor. Ar this information is almost always bad or irrelevant to the case at han Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his pre scription, is a bill.

As an educator I am impresse by the principle that the best way t get someone to do something is to involve him in the process. So the

I think there are advantages a well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

n purpose of drug information :he patient is to get his coopera- in following a drug regimen.

paration and distribution of ent drug information

We would hope to amass infor- tion from physicians, medical ieties, the pharmaceutical indus- and centers of medical learning. ultimate responsibility for uni- n labeling must, however, rest n the Food and Drug Administra- n. There is nothing wrong with agency saying, "this informa- n is generally agreed upon and refore it should be used," as long our process for getting the infor- tion is sound.

Distribution of the information problem. In great measure it uld depend on the medication in estion. For example, in the case an injectable long-acting proges- one, we would think it mandatory ssue two separate leaflets—a rt one for the patient to read be- e getting the first shot and a long e to take home in order to make a cision about continuing therapy. his case, the information might put directly on the package and removable at all. But for a medi- ion like an antihistamine this ormation might be issued sepa- ely, thus giving the physician the tion of distribution. This could eserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

---

ly the doctor can remove that fear 20 or 30 minutes of conversation.

I'm not suggesting that we hhold any information from the tient because, first of all, it would totally dishonest and secondly, it uld defeat the very purpose of the sert. I do think that a patient on the th control pill should know about e incidence of phlebothrombosis.

If you're going to tell a patient e incidence of serious adverse re- tions, then you have to tell him at a concerned medical decision as made to use a particular medi- tion in his situation after careful nsideration of the incidence of mplications or side effects.

notionally unstable patients pose special problem

There are patients who, be- use of severe emotional problems, uld not handle the information ntained in a patient package in- rt. Yet if we are going to have a ackage insert at all, we just can't ave two inserts. I think we might mply have to tell the families of ese patients to remove the insert om the package.

egal implications of the patient ackage insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

WVU Medical Center
—News—

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

PRESIDENT JAMES G. HARLOW recently announced that 125 West Virginia University faculty members have been promoted in rank. The 41 from the School of Medicine who were advanced, effective July 1, to the ranks listed below are:

Kyung Mi Ahn, Assistant Professor, Anesthesiology; Albert J. Azzaro, Associate Professor, Neurology; Donald M. Blatchley, Clinical Associate Professor, Medicine; Simpson S. Burke, Professor, Anesthesiology; Roy L. Butcher, Associate Professor, Obstetrics and Gynecology; Stephen W. Carmichael, Associate Professor, Anatomy; Robert Charles Cody, Associate Professor, Surgery; Howard D. Colby, Associate Professor, Physiology and Biophysics; Charles Robert Craig, Professor, Pharmacology; Carolyn Crutchfield, Associate Professor, Neurology.

John S. Ellingson, Associate Professor, Biochemistry; William H. Ellswood, Clinical Associate Professor, Radiology, Charleston Division; Dimitar S. Georgiev, Assistant Professor, Obstetrics and Gynecology; Louis Michael Glick, Clinical Assistant Professor, Medicine; Andrew W. Goodwin, Clinical Assistant Professor, Radiology, Charleston Division; Robert Fred Gustke, Clinical Assistant Professor, Medicine; Susan Shaw Gustke, Clinical Assistant Professor, Medicine; Rusi A. Hilloowala, Associate Professor, Anatomy; Stanley J. Kandzari, Associate Professor, Surgery; James W. Kessel, Assistant Professor, Anesthesiology.

Richard V. Lynch, Jr., Associate Professor, Medicine; Pervis C. Major, III, Assistant Professor, Microbiology; Michael G. Mawhinney, Associate Professor, Surgery; Henry F. Mengoli, Associate Professor, Microbiology; Philip Reese Miles, Associate Professor, Physiology and Biophysics; Mary L. Morgan, Assistant Professor, Physiology and Biophysics; Richard J. O'Brien, Assistant Professor, Medicine; Patricia B. Porterfield, Associate Professor, Psychiatry; Daniel Remen, Associate Professor, Anesthesiology; Ronald R. Scobbo, Assistant Professor, Medicine.

James Kermit Sexton, Clinical Associate Professor, Radiology, Charleston Division; Stanley R. Shane, Professor, Medicine; Lauralee L. Sherwood, Associate Professor, Physiology and Biophysics; David J. Smith, Associate Professor, Anesthesiology; Larry Jack Stemple, Clinical Assistant Professor, Surgery; Horace B. Thompson, Clinical Assistant Professor, Medicine; Louise E. Van Riper, Clinical Assistant Professor, Obstetrics and Gynecology; Elizabeth R. Walker, Instructor, Anatomy; Raymond B. Weiss, Associate Professor, Medicine; Roland J. Weisser, Jr., Assistant Professor, Family Practice; and David H. Williams, Clinical Associate Professor, Rediology.

Two New Staff Members Named

A former faculty member at George Washington University has been named Professor of Neurosurgery at the West Virginia University School of Medicine.

Dr. John L. Fox, a native of Billings, Montana, attended Trinity College in Hartford, Connecticut, and was graduated from George Washington University School of Medicine.

He returned to that institution for his residency after serving an internship at the UCLA Medical Center.

While in Washington, he served as Chief of the Neurosurgical Section at the Veterans Administration Hospital.

John L. Fox, M. D.

Joseph D. Smith, M. D.

A pediatric endocrinologist, Dr. Joseph Darrel Smith, has been named Professor and Chief of the Endocrine Service, Department of Pediatrics.

Doctor Smith comes to WVU from the University of Oklahoma School of Medicine, where he was Professor of Pediatrics, Chief of the Endocrine-Metabolic Services and Associate Director of the Clinical Research Center.

A native of Knoxville, Doctor Smith is a graduate of the University of Tennessee and its medical school, and served his internship and a two-year residency in pediatrics at the John Gaston Hospital in Memphis.

"For when was honey ever made with one bee in the hive"...

Thomas Hood, *The Last Man*

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The Month in Washington

• From the Washington Office of the American Medical Association.

THE American Medical Association has filed a lawsuit to block the implementation of new federal drug regulations that would pressure physicians to prescribe low-cost drugs for Medicare and Medicaid patients.

The Maximum Allowable Cost (MAC) regulations were approved in final form by Health, Education and Welfare Secretary Caspar Weinberger a few days before he left office.

Within 24 hours AMA filed suit in Northern Illinois District Court contending the program is the epitome in regulatory control—"an impossible labyrinth of drug regulations without assuring a favorable cost-benefit ratio."

The AMA contends the constitutional rights of both patients and physicians would be violated and that the program would produce adversary relationships among patients, physicians and pharmacists.

The disputed regulations would require pharmacists filling prescriptions for Medicare-Medicaid patients, primarily Medicaid, to be reimbursed on the basis of the lowest cost at which the product is generally available to providers. A higher-priced drug reimbursement would be allowed only if the physician signs that it is "medically necessary." The purpose is to stimulate purchase of generic drugs and discourage purchase of brand names that carry higher costs.

By and large physicians will be affected as they deal with Medicaid patients since there is no substantial outpatient benefit for Medicare. In states with anti-substitution laws, a Medicaid prescription for a brand name more expensive than the MAC would mean the patient would have to make up the difference in price unless the physician would be willing to change the prescription to another brand or generic prescription or sign that it is medically necessary.

At an HEW news conference, officials predicted most physicians would go along with the program, estimating that one-half of one per cent would use the "medically necessary" route for brand names that exceed the MAC.

The AMA suit, however, argues that the regulations "violate every one of the drug-reimbursement requirements of the Medicare-Medicaid statutes" and defy the law inasmuch as they represent government interference with medical practice by telling physicians which drugs they should prescribe.

Weinberger estimated the MAC program would save federal and state governments $60 million to $75 million a year when it swings into full operation within three to four years.

In addition to the control program, HEW will send all physicians a list of most frequently prescribed drugs along with the prices community pharmacies pay for them. The aim is to encourage physicians to prescribe cheaper products in their regular, private practice.

No sanctions are provided for physicians who decide to write out the "medically necessary" prescription message, but HEW officials speculated that state health agencies might take a look at physicians who do this consistently for all their Medicaid patients. The possible penalty by the state, if it wishes, would be ouster from Medicaid participation, according to the HEW officials.

No Bioequivalence Problems

Before a Maximum Allowable Cost can be established for drugs, the Food and Drug Administration must first indicate that there are no bioequivalence problems among its several brands. The HEW Pharmaceutical Reimbursement Board would then propose a MAC at a level equal to the lowest cost at which the drug is generally available to providers. Before the MAC can officially be established it must be reviewed by a non-governmental advisory committee and published in the Federal Register for comment.

The regulations establish both the Pharmaceutical Reimbursement Board and the five-member outside advisory group.

HEW said about one quarter of commonly prescribed drugs are available from multiple sources. However, the number for which bioequivalence problems can be ruled out is smaller.

The reimbursement that a pharmacist receives for drugs he provides Medicare and Medicaid patients will be based on an estimate of his cost of buying the drug plus a dispensing fee, or on his usual charge to the general public, whichever is the smaller. Program agencies such as a state Medicaid program would make the estimates according to price information supplied on a regular basis by HEW.

Synthroid®

(sodium levothyroxine, U.S.P.) FLINT

or

desiccated thyroid

consider the differences...

Desiccated animal gland thyroid products can vary in potency from batch to batch.

Because iodine content rather than biological assay is used to measure the standard of many desiccated thyroid products, biologic activity can vary from batch to batch. Even when biologic assay is employed, biologic activity can only be approximated.

1 It is recognized that T_4 and T_3 content in desiccated thyroid and thyroglobulin varies from animal to animal, by animal species, geography, and animal diet.

2 Of therapeutic concern: In addition to varying amounts of T_4, desiccated thyroid may contain varying amounts of T_3, a potent compound with rapid onset and fleeting action that can produce metabolic surges.

3 Even when kept under proper storage conditions, desiccated thyroid deteriorates more rapidly than the synthetic hormone.

4 The "usual maintenance dose" for the widely prescribed desiccated thyroid is "from 1 grain to 3 grains per day, but it may vary, in individual patients from 1/2 grain to 10 grains."[1] The "usual maintenance dose" of the most widely prescribed thyroglobulin (which is also a desiccated thyroid product) is "0.5 to 3.0 grains daily."[2]

1. Armour Thyroid (Tablets). 1975 Physicians' Desk Reference. p. 561.
2. Proloid® (thyroglobulin). 1975 Physicians' Desk Reference. p. 1575.

Every batch of Synthroid® T_4 is of controlled potency. (sodium levothyroxine, U.S.P.) FLINT

SYNTHROID is T_4. It provides your patients with everything they need for complete thyroid replacement therapy.

1 Sodium levothyroxine is *not derived* from any animal gland source. It is a synthetic and, since sodium levothyroxine is the only active ingredient, its weight is the sole determinate of potency.

2 SYNTHROID (sodium levothyroxine) is T_4 which is converted by the patient to T_3 at the cellular level, thereby providing a physiologic source and amount of T_3 to meet metabolic needs for complete thyroid replacement therapy. Because the onset of effect is slower and more steady, the possibility of sudden metabolic surges is reduced with SYNTHROID therapy.

3 SYNTHROID (sodium levothyroxine) products have a longer and more reliable shelf life than Thyroid U.S.P. when kept under the same proper storage conditions. There is no animal protein present in SYNTHROID products.

4 A recent study of 44 patients with hypothyroidism indicates that 89 percent of the patients were maintained with doses of L-thyroxine (SYNTHROID) between 100 mcg. and 200 mcg. (0.1 mg. and 0.2 mg.) per day.[3]

3. Stock, J.M., Surks, M.I., and Oppenheimer, J.H.: Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. *290*:529-33, 1974.

Eliminates many of the uncertainties of desiccated thyroid therapy.

Synthroid®

(sodium levothyroxine, U.S.P.) FLINT

FLINT LABORATORIES
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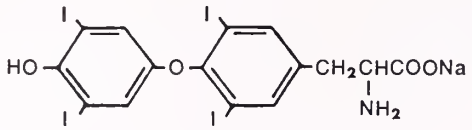
See reverse side for full prescribing information.

Synthroid®
(sodium levothyroxine, U.S.P.*) FLINT

Synthroid Tablets—for oral administration
Synthroid for Injection—for parenteral administration

Description

SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine). L-thyroxine is the principal hormone secreted by the normal thyroid gland.



Sodium Levothyroxine

Actions

SYNTHROID (sodium levothyroxine) **Tablets**, taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications

SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications

There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings

Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions

Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets**, the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions

Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration

For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occurs and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How supplied

SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—violet . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green. Depending on strength, these tablets are available in bottles of 100, 500, 1000 and 5000.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution

Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

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Obituaries

BOYD F. BROWN, M. D.

Dr. Boyd F. Brown of Huntington, a retired anesthesioloist and dermatologist, died on July 1 in a hospital there. He was 78. Doctor Brown was a member of the staffs of St. Mary's, Doctors Memorial and Cabell Huntington hospitals in Huntington. A veteran of World War I, he had practiced in Huntington for about 50 years.

A native of Staunton, Virginia, Doctor Brown received his M. D. degree in 1924 from the Medical College of Virginia. He was an honorary member of the Cabell County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors included the widow; one daughter, Mrs. Walter Marais of London, England; a son, Boyd Brown, Jr., of Florida; a step-son, Peter Buffington of Huntington; and one brother, Dr. Leland Brown of Staunton.

* * *

G. G. IRWIN, M. D.

Dr. G. G. Irwin of Charleston, a retired urologist, died on July 27 in a Charleston hospital. He was 84. A native of Holyoke, Massachusetts, Doctor Irwin received his M. D. degree in 1913 from the University of Vermont College of Medicine. He interned at Providence Hospital in Holyoke and did postgraduate work at the U. S. Naval Medical School and the New York Postgraduate Medical School. He practiced at Amherst and Greenfield in Massachusetts before coming to West Virginia in 1920.

Doctor Irwin was President of the Kanawha Medical Society in 1933 and was a former member of the Council of the West Virginia State Medical Association. He was an honorary member of the Kanawha Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are a son, G. G. Irwin, Jr., of Arlington, Virginia; and a sister, Gertrude Irwin of Farmington, Connecticut.

* * *

EVERETT W. McCAULEY, M. D.

Dr. Everett W. McCauley, Chief of Staff of Bluefield Sanitarium, died on July 25 in a Bluefield hospital. He was 69. Doctor McCauley headed the Sanitarium's obstetrics and gynecology department, and was a member of its Board of Directors.

A native of Burlington, North Carolina, Doctor McCauley was graduated from Elon College in that state and received his M. D. degree in 1932 from the Medical College of Virginia. He served an internship and residency at Tampa Municipal Hospital.

(Continued on Page xviii)

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) Oral Suspension
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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County Societies

TYGART'S VALLEY

The 26th Annual Postgraduate Session of the Tygart's Valley Medical Society was held on Thursday, June 19, at the Faraway Hills Country Inn in Beverly. Guest speakers for the scientific program were introduced by Dr. Elvin G. Kreider of Philippi, President.

Dr. Jeffrey Maisels, Assistant Professor of Pediatrics and Chief of the Division of Newborn Medicine, Milton S. Hershey Medical Center, Hershey, Pennsylvania, spoke on "Current Diagnosis and Management of Neonatal Respiratory Distress Syndrome." Doctor Maisels said that 50 per cent of infant deaths in the first week were due to this disease. He said at the present time it is possible for this to be diagnosed by intra-uterine methods.

"Current Status and Clinical Applications of Echocardiography" was the topic of Dr. Abnash C. Jain, Associate Professor of Medicine at the West Virginia University Medical Center. Doctor Jain said echocardiography could be used to demonstrate lesions of the mitral valve and subaortic stenosis and was very useful in estimation of fluid volume of the heart and in checking prosthetic valves, replacing them, and avoiding use of catheterizations postoperatively.

Dr. Herbert E. Warden, Professor of Surgery and Director of Thoracic and Cardiovascular Surgery at WVU, spoke on "Congenital Heart Disease." Doctor Warden divided his topic into common problems, which are vascular rings, patent ductus, coarctation, pulmonary stenosis, and also discussed palliative stages. He said many of the two-stage procedures might be performed in one stage and that all doctors should be on the lookout for heart lesions—especially where there was growth failure, respiratory difficulty, hepatomegaly and cyanosis.

Approximately 40 members attended the scientific session and more than 65 members and guests attended the banquet. The banquet speaker was the Honorable Robert E. Maxwell, Federal District Judge for Northern West Virginia (*Editor's note*: The text of Judge Maxwell's address appears elsewhere in this issue of *The Journal*).—A. Kyle Bush, M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on June 3 at the Hotel Morgan in Morgantown. Dr. Isaiah A. Wiles reported on the progress of the blood pressure screening. A number of letters, including one from the Monongalia County Commission requesting the assistance of the Society in procuring a Chief Coroner, were read.—H. Summers Harrison, M. D., Secretary.

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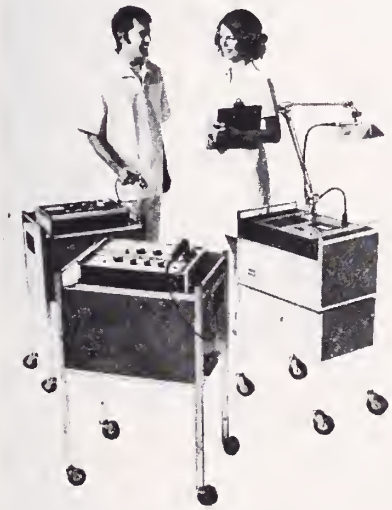

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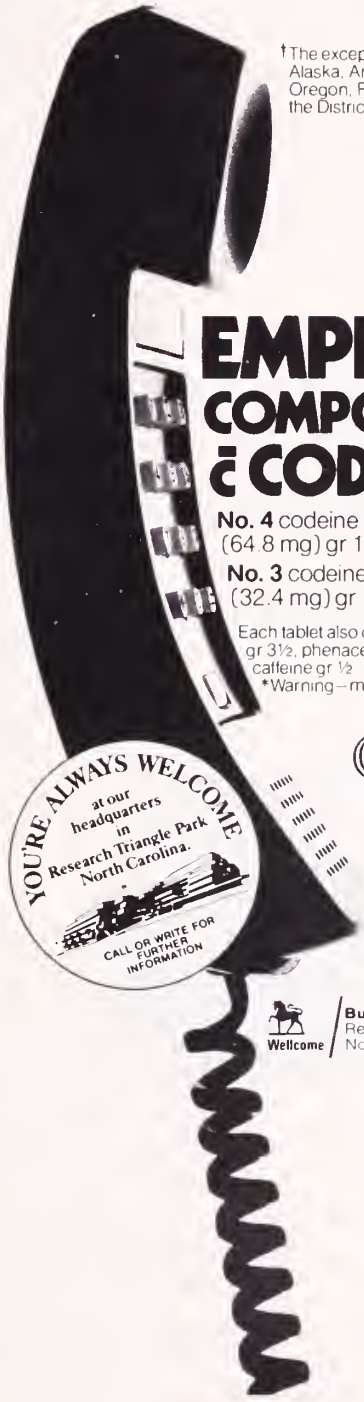

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Book Review

HANDBOOK OF PEDIATRICS—By Henry K. Silver, M. D.; C. Henry Kempe, M. D.; and Henry B. Bruyn, M. D. Lange Medical Publications, Drawer L, Los Altos, California. 11th Edition. 1975. 705 Pages. Price $7.50.

The 11th edition of this American style handbook fulfills very well the objective set by the authors for this and previous editions "to present the practicing physician and medical student a concise and readily available digest of material necessary for the diagnosis and management of pediatric disorders." It is a very useful companion in the pocket or diagnostic kit of both the hospital-based pediatrician and the physician in family practice. Information on such diverse subjects as levels of psychological development and normal values for seldom seen laboratory tests is immediately at hand. Concise descriptions of clinical and laboratory findings, supported by numerous tables, help to keep one on the right diagnostic track.

For space reasons, the authors are dogmatic in their outlines of treatment. These are acceptable, but not everyone will consider them the best. There is no claim to complete coverage. Access, when time allows, to standard texts and current literature, is considered essential.

Two omissions were noteworthy. The possible long-term management of the child who has had a convulsion with fever was not specifically considered. Abdominal pain was not mentioned as a rather common and sometimes most confusing manifestation of acute juvenile rheumatoid arthritis.

Enough changes and revisions have been made in this 11th Edition to make it as up-to-date as any other textbook and to justify its publication. Whether the owner of a 10th Edition will consider the 11th worth the price will depend upon his degree of enthusiasm for the latest thing.—William J. Ball, M. D., Aurora, Illinois.

OBITUARIES (*Continued from Page xiv*)

Doctor McCauley came to Bluefield in 1946 after serving four years in the Medical Corps of the U. S. Army during World War II. He was a Fellow of the American College of Obstetrics and Gynecology and was a Past President of the West Virginia Obstetrical and Gynecological Society. He was a member of the Mercer County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; two daughters, Mrs. Vincent Monacella of Fairfax, Virginia, and Mrs. Jean Homesley of Mooresville, North Carolina; two sisters, Mrs. Grace Hoskins of St. Joseph, Michigan, and Mrs. Rebecca King of Greenville, Michigan; and three brothers, Samuel McCauley of Burlington, North Carolina; Lon A. McCauley, Jr., of Anchorage, Alaska; and George A. McCauley of Union Ridge, North Carolina.

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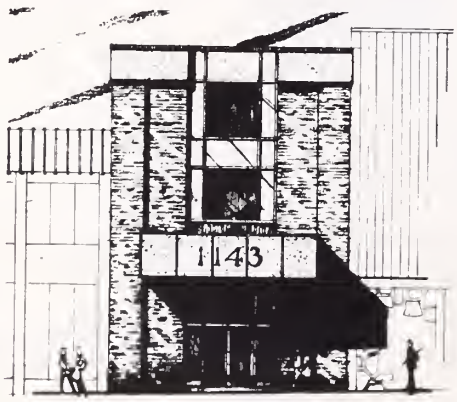

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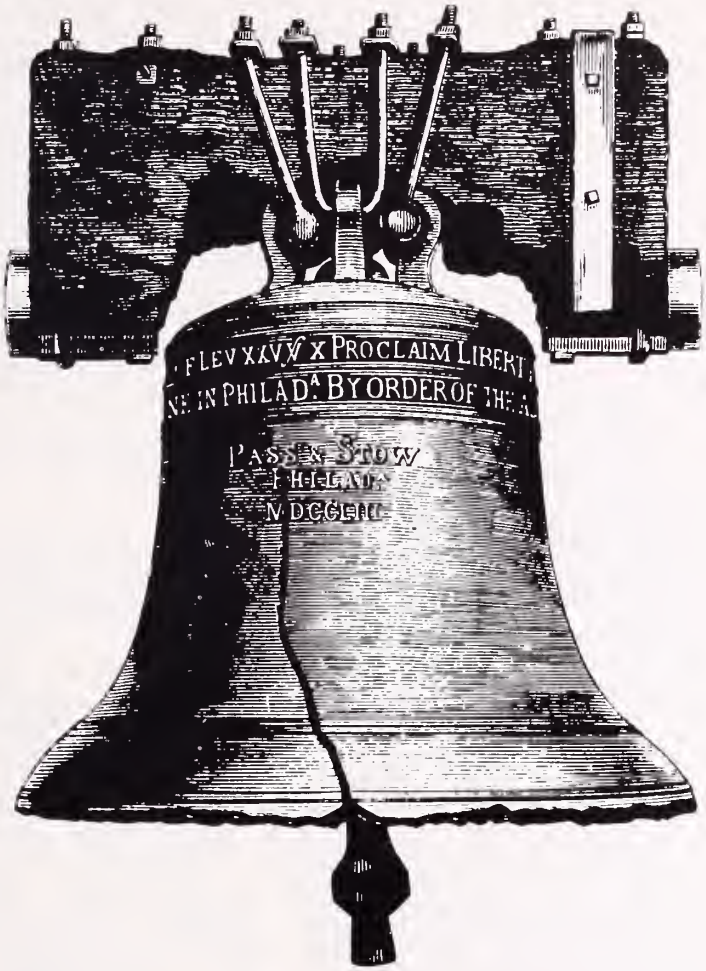

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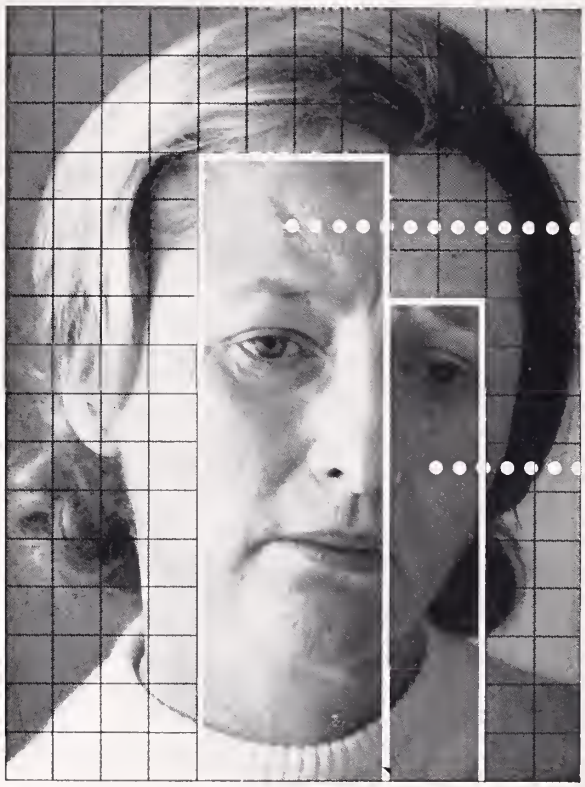

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Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in e and/or severity of grand mal sei re require increased dosage of star r convulsant medication; abrupt v may be associated with tempora i crease in frequency and/or seve y seizures. Advise against simulta o gestion of alcohol and other CNS e sants. Withdrawal symptoms (si those with barbiturates and alco occurred following abrupt disco (convulsions, tremor, abdomina cle cramps, vomiting and sweati addiction-prone indlviduals und

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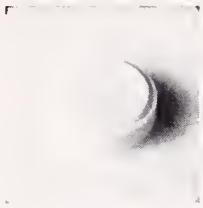
t is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium®
(diazepam)
2-mg, 5-mg, 10-mg tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

e because of their predisposi-
tuation and dependence. In
lactation or women of child-
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s: If combined with other psy-
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barbiturates, MAO inhibitors
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Usual precautions indicated in
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or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

OCTOBER
1975

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Member 1975

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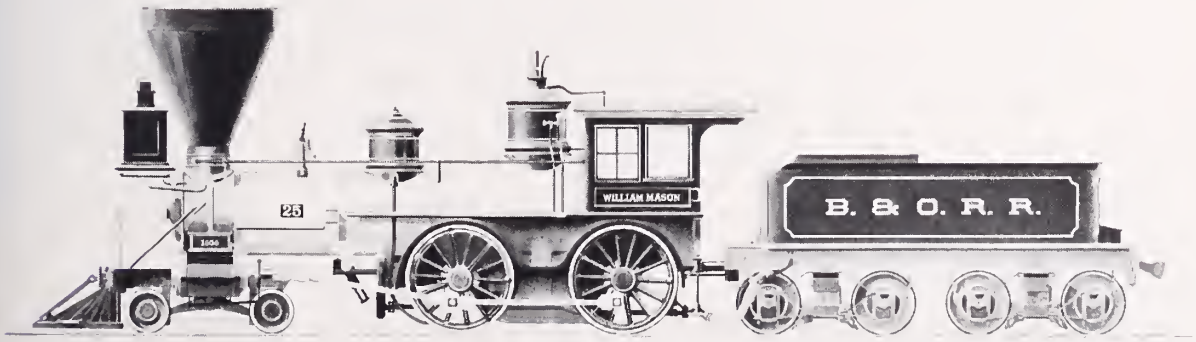

The William Mason (1856)

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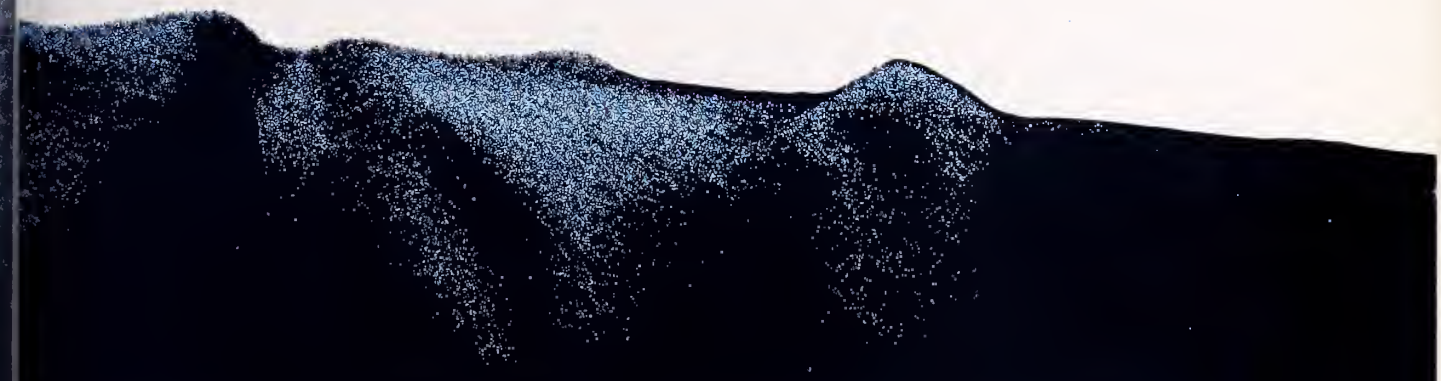
Warning: may be habit forming

*Based on usage by dosage form; data gathered by independent research organization.



TION: WANS® Children: (Blue) pyrilamine maleate d pentobarbital sodium* ½ gr (30 mg) scored for . WANS® No. 1: (Pink) pyrilamine maleate 50 mg barbital sodium* ¾ gr (50 mg) scored for ½ dosage. No. 2: (Yellow) pyrilamine maleate 50 mg and ital sodium* 1½ gr (100 mg) scored for ½ dosage.

NG: may be habit forming.

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GS: Barbiturates may be habit forming. Pre-existing ic disturbances may be aggravated. Idiosyncratic may occur. Acquired sensitivity may result in allergic . Safety in pregnancy has not been established.

TIONS: Use cautiously with other sedative, hypnotic c agents. Use with caution in patients with acute or epatic disease, fever, hyperthyroidism, diabetes severe anemia, congestive heart failure, or a history ependence or suicidal tendencies. May impair and coordination with increased accident risk.

ADVERSE REACTIONS: Drowsiness, fatigue, vertigo, incoordination, tremor, muscle weakness, ataxia, hypotension, respiratory depression, delirium and coma. Dryness of nose, mouth, and throat, pupillary dilatation or blurred vision, urinary retention, abdominal pain, nausea, vomiting, diarrhea, and hypersensitivity reactions. Overdose may result in hallucinations, excitement, ataxia, incoordination, athetosis, convulsions, and death.

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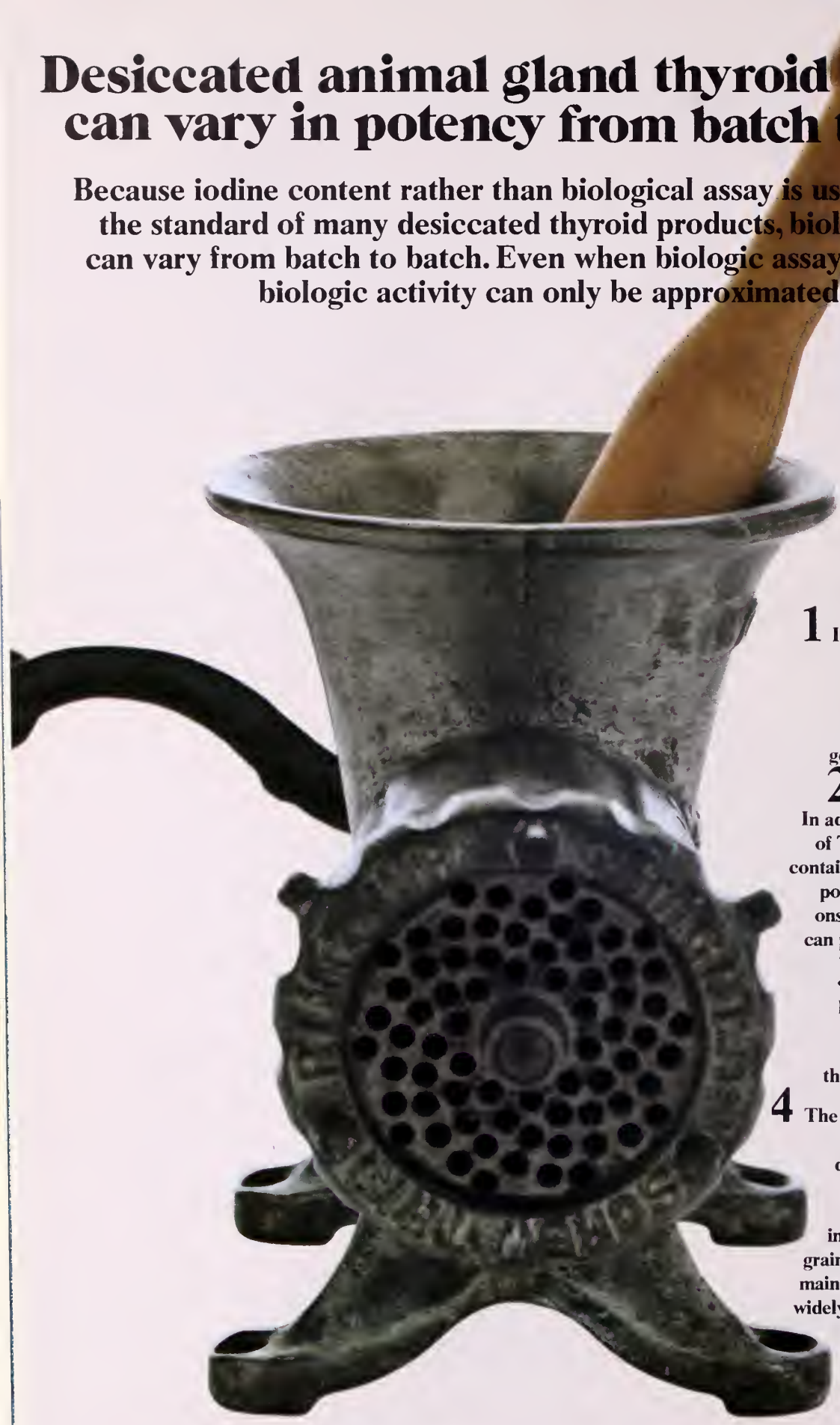
or

desiccated thyroid

consider the differences...

Desiccated animal gland thyroid products can vary in potency from batch to batch.

Because iodine content rather than biological assay is used to measure the standard of many desiccated thyroid products, biologic activity can vary from batch to batch. Even when biologic assay is employed, biologic activity can only be approximated.



1 It is recognized that T_4 and T_3 content in desiccated thyroid and thyroglobulin varies from animal to animal, by animal species, geography, and animal diet.

2 Of therapeutic concern: In addition to varying amounts of T_4, desiccated thyroid may contain varying amounts of T_3, a potent compound with rapid onset and fleeting action that can produce metabolic surges.

3 Even when kept under proper storage conditions, desiccated thyroid deteriorates more rapidly than the synthetic hormone.

4 The "usual maintenance dose" for the widely prescribed desiccated thyroid is "from 1 grain to 3 grains per day, but it may vary, in individual patients from 1/2 grain to 10 grains."[1] The "usual maintenance dose" of the most widely prescribed thyroglobulin (which is also a desiccated thyroid product) is "0.5 to 3.0 grains daily."[2]

1. Armour Thyroid (Tablets). 1975 Physicians' Desk Reference. p. 561.
2. Proloid® (thyroglobulin). 1975 Physicians' Desk Reference. p. 1575.

Every batch of Synthroid® T_4 is of controlled potency. (sodium levothyroxine, U.S.P.) FLINT

SYNTHROID is T_4. It provides your patients with everything they need for complete thyroid replacement therapy.

1 Sodium levothyroxine is *not derived* from any animal gland source. It is a synthetic and, since sodium levothyroxine is the only active ingredient, its weight is the sole determinate of potency.

2 SYNTHROID (sodium levothyroxine) is T_4 which is converted by the patient to T_3 at the cellular level, thereby providing a physiologic source and amount of T_3 to meet metabolic needs for complete thyroid replacement therapy. Because the onset of effect is slower and more steady, the possibility of sudden metabolic surges is reduced with SYNTHROID therapy.

3 SYNTHROID (sodium levothyroxine) products have a longer and more reliable shelf life than Thyroid U.S.P. when kept under the same proper storage conditions. There is no animal protein present in SYNTHROID products.

4 A recent study of 44 patients with hypothyroidism indicates that 89 percent of the patients were maintained with doses of L-thyroxine (SYNTHROID) between 100 mcg. and 200 mcg. (0.1 mg. and 0.2 mg.) per day.[3]

3. Stock, J.M., Surks, M.I., and Oppenheimer, J.H.: Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. *290*:529-33, 1974.

Eliminates many of the uncertainties of desiccated thyroid therapy.

Synthroid®

(sodium levothyroxine, U.S.P.) FLINT

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

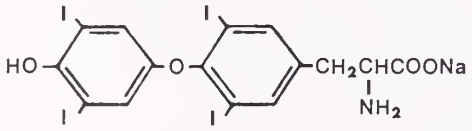
See reverse side for full prescribing information.

Synthroid®
(sodium levothyroxine, U.S.P.*) FLINT

Synthroid Tablets—for oral administration
Synthroid for Injection—for parenteral administration

Description

SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine). L-thyroxine is the principal hormone secreted by the normal thyroid gland.



Sodium Levothyroxine

Actions

SYNTHROID (sodium levothyroxine) **Tablets,** taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications

SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications

There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings

Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions

Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions

Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration

For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occurs and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How supplied

SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—violet . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green. Depending on strength, these tablets are available in bottles of 100, 500, 1000 and 5000.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution

Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

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*U.S. Pat. 2,889,363

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Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline. Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

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NEOSPORIN® Ointment
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is a famous fighter, too.

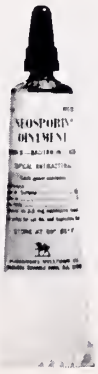
Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin* brand Polymyxin B Sulfate 5,000 units, zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base), special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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Putting out the fires of arthritic pain

Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*

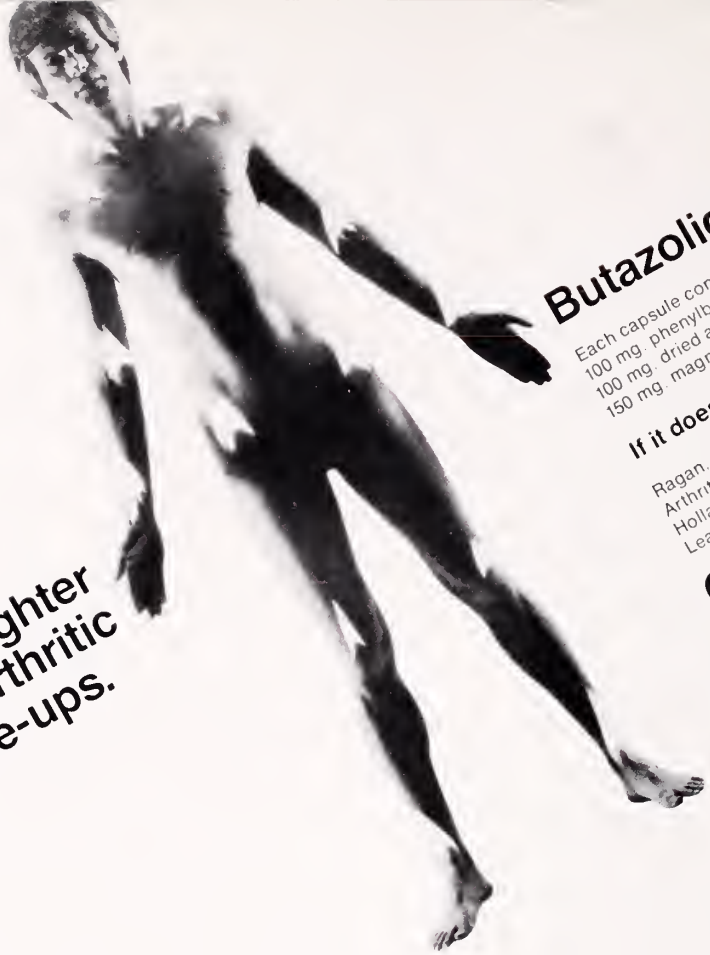
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.

Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.

Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.



Fire fighter for arthritic flare-ups.

Butazolidin® alka

Each capsule contains
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C.: The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335

Geigy

Important Note This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
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The West Virginia Medical Journal

Vol. 71, No. 10 October, 1975

Presidential Address*

William E. Gilmore, M. D.

I am deeply moved by your generous, warm reception. My admiration for the medical community of West Virginia heavily increases my sense of responsibility and gratitude.

Three weeks ago, on a very hot Sunday afternoon, in a non-air conditioned, metal fabricated studio of station WDTV, atop Fisher's Mountain in Lewis County, I was the guest on a news quiz show called "Focus" and was recognized as "The Man Who Did Not Make Lengthy Speeches." This could well be the best news you have heard today.

Last year at this time, not being certain of the attendance at this session, I invited our family—all of whom came. For the past 365 days, each has held his breath—looking forward to the return invitation to this magnificent resort. It is the greatest privilege to introduce them to you again. First, by every consideration, is our Queen, Maxine. During the course of the year, although they were considered several times, I am happy to say that suicide and homicide were never brought to a vote. Truly, Maxine was my greatest resource for helpful criticism and timely support.

Next, by sex and seniority: Our first-born, Susan, employed in television program sales in Charlotte, North Carolina. Her sister, Betsy, of Wachovia Bank and Trust Company, whose philosophy, "If you can't beat him, marry him," and her husband, Mr. Philip Small, of North Carolina National Bank, in Charlotte, North Carolina. Next is our son, Bill. Bill is Director of Convention Sales at the Fairmont-Roosevelt Hotel in New Orleans. Bill's twin brother, Dr. John Gilmore, likes the "High Country." He is an internal medicine resident at Presbyterian Medical Center in Denver. We are hoping to interest him in returning to West Virginia: either Spruce Knob or Flat Top. Only one remains in the nest. Maxine and I don't always know what to do with him, but we are certain we couldn't get along without him: our son, Scott, a basketballer and for the past two years on the State Championship Big Red Golf Team, a senior at Parkersburg High School.

The Author

- **William E. Gilmore, M.D., Immediate Past President, West Virginia State Medical Association; and Clinical Professor of Surgery, West Virginia University School of Medicine, Morgantown.**

William E. Gilmore, M. D.

*Presented at the second and final session of the House of Delegates, 108th Annual Meeting of the West Virginia State Medical Association, The Greenbrier, White Sulphur Springs, W. Va., Saturday, August 23, 1975.

In this day, it would be utterly impossible to be President of this Association while engaged, alone, in private practice, without the support of a number of my colleagues and my own office staff, who have protected my practice while I was frequently absent from Parkersburg. I shall be forever grateful to these individuals.

Some Reflections

Now, please permit a few reflections. There were a few roster changes in the professional staff at our state office this past year. Upon Bill Lively's resignation May 1, Charles Lewis was employed as our new Executive Secretary. At a critical time, and with short notice, we are extremely fortunate to have a true and gifted professional at the helm in our Charleston office. Loyal, devoted assistants, Custer Holliday, Mary Hamilton and Sue Shanklin—working long hours and under stressful conditions—made the transition of executives effective and smooth. We have since employed Marilyn Reno, who provides needed support to an industrious staff.

No less than the professional staff, the voluntary services of all of you—officers, Council and committee members—provide the *thought* and *muscle* to make the West Virginia State Medical Association a breathing, lively organization that selflessly represents every physician in West Virginia.

Professional Liability

A year ago, PSRO (the Professional Standards Review Organization program) was still the new kid on the street. In a very few months, however, professional liability replaced PSRO on the front burner. Stop-gap measures have been necessary in many states to provide some form of practice protection when insurance carriers either cancelled liability coverage for some physicians, or completely ceased operations in the professional liability field. Today, some of our colleagues in other states are without, and cannot obtain, professional liability insurance *at any price*! Emergency rooms and operating theaters in some hospitals were closed because of the problem. Increased incidents and larger awards have made professional liability insurance untenable, or at best, have resulted in gross premium increases. The West Virginia State Medical Association has an agreement with Aetna Life and Casualty to provide professional liability insurance for its members until January 1, 1978.

But let us not delude ourselves that we have unlimited time to cultivate long-term solutions to the liability crisis. Legislation of several forms appears to be the only logical long-term solution. There have been differing approaches to the problem, but all hats are off to the citizens of Indiana and the Indiana State Legislature who, with counsel from the Indiana State Medical Association, have broken the ice and achieved significant changes in liability legislation. Other states have taken their cue and developed "Indiana-style" changes.

Too many words and too much time have already been lost accusing one another of causing the liability crisis. Patients, physicians, attorneys, insurance carriers, and legislators, by action or inactivity, all have contributed to the threatening dilemma. The only reasonable conclusion, therefore, is that all who have contributed to the professional liability disaster *separately*, must now *together* work to correct this consuming problem.

Officers of the West Virginia State Medical Association have already joined attorneys, insurers, judges and hospital administrators at an early hearing of the Subcommittee on Health of the West Virginia Legislature. The Subcommittee Co-Chairmen, Dr. H. Darrel Darby of Huntington and Mrs. W. W. Withrow of Beckley, have accepted the challenge from the Legislature and the people of West Virginia to develop a fair climate for liability in West Virginia in time for the next regular session of the Legislature in January, 1976. Without a map, Indiana made the journey from dream to reality in six months. Ohio, last month, achieved similar success. With Indiana and Ohio leading the way and, as the weather moves from West to East, West Virginia is in the path and *must do no less*: Thunder is in the distance—the warning is ominous.

Professional Standards Review Organization

With the sacrifice of much time and in the face of considerable emotion, Dr. Harry Weeks of Wheeling, President of the West Virginia Medical Institute, and Charles Lewis, the former Executive Director of the Institute, have brought patience, insight and strong leadership to bear in preparing West Virginia physicians for PSRO. On July 1, 1975, the West Virginia Medical Institute was awarded a conditional contract of $630,000. With Mr. Lewis now in the Association office, the Institute is currently seeking and screening applications for a full-time director. Headquarters will continue to be in Charleston, but there will be three additional offices in geographically - scattered, not-yet-named, outlying areas. Currently, the Institute has 960 physician members. The professional staff of the Institute has worked with the medical staffs of 50 hospitals, supplying technical help where needed. The in-

tent is to cooperate with West Virginia physicians to protect patient and physician rights, leaving hospital administration more properly preoccupied in insurance matters.

Based on hospital surveys of admission criteria, current review, and medical evaluation of patient care, very soon six hospitals will be given exemption from direct Institute review. Within the next year, the goal is to designate one additional hospital per week for similar exemption from outside review. A fast pace is being set to guarantee as much local supervision as possible. Doctor Weeks has just returned from a meeting in San Francisco, gathering pearls, so that West Virginia can soon qualify for a full operational grant.

The marriage of utilization review to quality control was the label on the PSRO package which we bought. A huge cut-back in federal funds has highlighted *utilization* review at the expense of *quality* review. Such a package will not appeal to the conscientious, highly-motivated physician.

All agree that physician income should reflect physician services. Many of us shun, however, a sufficient concern for patient expenses for physician-ordered goods and services: hospital admission, length of stay, laboratory tests, x-rays, medications, appliances, and other forms of treatment. We cannot escape our responsibility in this relationship. *Nobody but we* can do it. Literally, we are the purchasing agent for our patients.

Preventive Medicine and Public Health

Before several of our component medical societies, I have attempted to make the case for an all-out effort in the detection and adequate treatment of patients with hypertension. "Minimal hypertension" is a serious misnomer. But of all man's afflictions, and with the presently available forms of treatment, the identification and adequate treatment of hypertensive persons could well be the greatest purchase of good health this country could possibly make. The ravages of the by-products of hypertension, especially strokes and myocardial infarction, are monstrous. Other insidious public health problems responsive to relatively simple solutions could be obesity, alcoholism, smoking, and failure to use safety belts. Public educational efforts in all of these matters have been enormous. The effect on the public has been distressingly poor. The evidence, I think, has been adequately and fairly presented so that interpretation by the public is clear, but acceptance of preventive measures against habits deep-rooted in American culture comes very slowly and painfully. Lightning means little until it becomes personal.

Medical Education

In 1970, The Carnegie Commission on Higher Education, a blue-ribbon, non-political, nonpartisan commission, published a special report highlighting a number of goals for a 10-year period to end in 1980. The report was concerned with pre-professional, basic science, clinical and postgraduate education. It is interesting to see, but not generally advertised, that halfway into the examination period, the goals are very realistically being approached.

We must all be alert and familiar with current ideas and trends in formal medical education. It is of more urgency, however, that we focus our attention and energies on *continuing* medical education for the physicians primarily concerned with direct patient care. This is especially true for those of us five years beyond our formal education—five years being generally accepted as the maximum half-life of medical information today. It could well be less tomorrow.

It pleases me to be able to report that the West Virginia State Medical Association recognizes this urgent need for everyday continuing medical education, and was either the fifth or sixth state medical association to have been approved by the American Medical Association Department of CME to survey and judge the quality of CME programs in the hospitals of their respective states. The greatest thrust in improving the quality of patient care will undoubtedly come through greater activity in day-by-day continuing medical education in our hospitals and in our offices.

Manpower

The West Virginia Joint Council of Teaching Hospitals, co-sponsored by the West Virginia State Medical Association, issued a summary and recommendations in 1974, recognizing the State's physician maldistribution problem and the relatively large proportion of older physicians. Projections of West Virginia physician needs by 1984 indicate that shortage and attrition problems are greatest among seven basic specialty areas when related to U.S. norms: Accordingly, to bring West Virginia to the U.S. norm—and with delivery of medical care as presently practiced—we need, by 1984, 221 general family practitioners, 142 internists, 112 psychiatrists neurologists, 69 obstetricians gynecologists, 55 pediatricians, 49 anesthesiologists and 47 general surgeons.

Locally determined physician needs and specialty patterns may differ considerably from those which are appropriate at a general, statewide level. Recruitment goals and methods may differ considerably among local areas.

Emergency Medical Service

As it is with highways in West Virginia, our challenge in emergency medical care may seem to be severe. Utilizing help from many sources, the highway problem is well on its way to opening this beautifully rugged State to the rest of the nation, most particularly to the highly-populated eastern metropolitan areas. The certain increasing development of recreation areas in West Virginia is further reason to quicken the pace of our activity in emergency medical care.

How great is the need? In the United States, about 800,000 persons die each year from various surgical and medical emergencies. Experts estimate that 200,000 of these lives could be saved if all the knowledge and skills of modern science were made immediately available to all citizens. The goal is high, but it is morally mandatory. The West Virginia State Medical Association, the West Virginia Trauma Committee of the American College of Surgeons, and the Governor's Highway Safety Commission are cooperating to meet the challenge in the emergency field.

The leading causes of death in West Virginia are diseases of the heart, representing almost 50 per cent of the total. Next are deaths due to malignant neoplasms. Third, are deaths due to cerebrovascular diseases, and fourth, deaths due to trauma. It can quickly be seen that sudden causes of death – heart disease, strokes and trauma – make up the greatest percentage of deaths in West Virginia, and it is in these categories that high-quality emergency medical service can be most beneficial. Through the great work of the West Virginia Department of Health and cooperating physician-teachers, personnel have been trained wherever emergency medical equipment is made available. At this time, there are approximately 4,500 trained emergency medical technicians and approximately 500 trained paramedics in West Virginia. This is the highest per capita ratio in the United States, with the possible exception of Wisconsin.

Flexibility

The practice of medicine, through new discovery and sheer numbers of physicians as well as patients, requires constant adjustment. It cannot be otherwise and the adjustment or change requires sober examination. In the light of these times, we can launch out in new adventure or amend past standings as it would beneficially affect the majority of West Virginians. Physicians traditionally have been *politically conservative*. Despite the rumblings about foreign medical graduates, we traditionally have been *liberal* in *human relations*. Sir William Osler has said, "Nationalism, for a number of reasons, has been the great curse of humanity. Ignorance is at the root. Personal, first-hand intercourse with men of different lands, when the mind is young and plastic, is the best vaccination against the disease." We would do well to listen to this great student of medicine and humanity.

Conclusion

I have many times wondered how I would face this moment. (Last night, when the musicians at dinner struck up a lively tune, for a second or two, I joined their rhythm—at which point Maxine reminded me I must not crack up until after tomorrow.) The year has brought moments high and low. The high moments were no problem. Cool heads of warm friends have prevailed on every occasion.

So I take leave of this office with mixed emotions. I am anxious to return to more than a part-time surgical practice. It has been a source of great concern that my patients not come up short because of official responsibilities. Leaving this official position does not bring elation, however. Because of my responsibility as President, I have been placed in situations, mostly favorable, in which no words could express my feelings of gratitude, accomplishment, appreciation and relief.

I therefore close these reflections, as I did in the August issue of the *Medical Journal*:

The hallmark of our Association has been, and is, *compassion* for humankind; *dedication* to the noblest and most demanding profession; and *loyalty* to each other in our uncommon cause.

I salute you for expressing and preserving these precious ideals—and I humbly thank you from the bottom of my heart for the priceless opportunity to taste them.

Thank you.

Aneurysms Of The Thoracic Aorta: Current Approach To Treatment

Jamal H. Khan, M. D.; M. Zafrullah Khan, M. D.; And William E. Barnes, M. D.

Aneurysms of the thoracic aorta are the most lethal lesion involving the aorta. It is generally not recognized that the incidence of dissection in thoracic aneurysms is three times that of the incidence of rupture in abdominal aneurysms.[9] Untreated dissection carries a mortality of 68 per cent in three weeks and of 90 per cent in three months.[4,5]

Resection of a thoracic aneurysm is a formidable undertaking in itself. It is further complicated by frequent association of cardiac, pulmonary and renal disease in this group of patients. Early experience with surgery was dismal in most centers.[1] Thus it was that a medical approach to the treatment as outlined by Wheat et al[1,2] was greeted with a great deal of enthusiasm. It remains the treatment of choice in selected patients; however, it has become apparent that it cannot be applied universally and also, that some patients treated medically will fail to respond or will show progression of their disease subsequently. Refinement of surgical techniques, therefore, remains of prime importance in the treatment of this condition.

Dissecting aneurysms of the thoracic aorta are classified into four types as illustrated in Figure 1.

The Author

- **Jamal H. Khan, M. D.; M. Zafrullah Khan, M. D.; and William E. Barnes, M. D., Section of Cardiothoracic Surgery, Charleston Area Medical Center, Charleston, West Virginia.**

Approach to Treatment

While medical management remains the treatment of choice in most descending thoracic aneurysms, indications for surgical interference are becoming better defined in the light of follow-up studies at various centers. Immediate operation seems to be the preferred choice in cases of Type I and Type II dissection. Results of medical therapy in these patients have been very poor.[6,7] The technique involves cardiopulmonary bypass with insertion of a graft in ascending aorta with or without aortic valve replacement. The patient, however, may be stabilized by hypotensive therapy while being transported or awaiting surgery. Treatment of Type IV dissection consists of immediate suspension of perfusion through the femoral artery and re-establishment of perfusion through the ascending aorta.

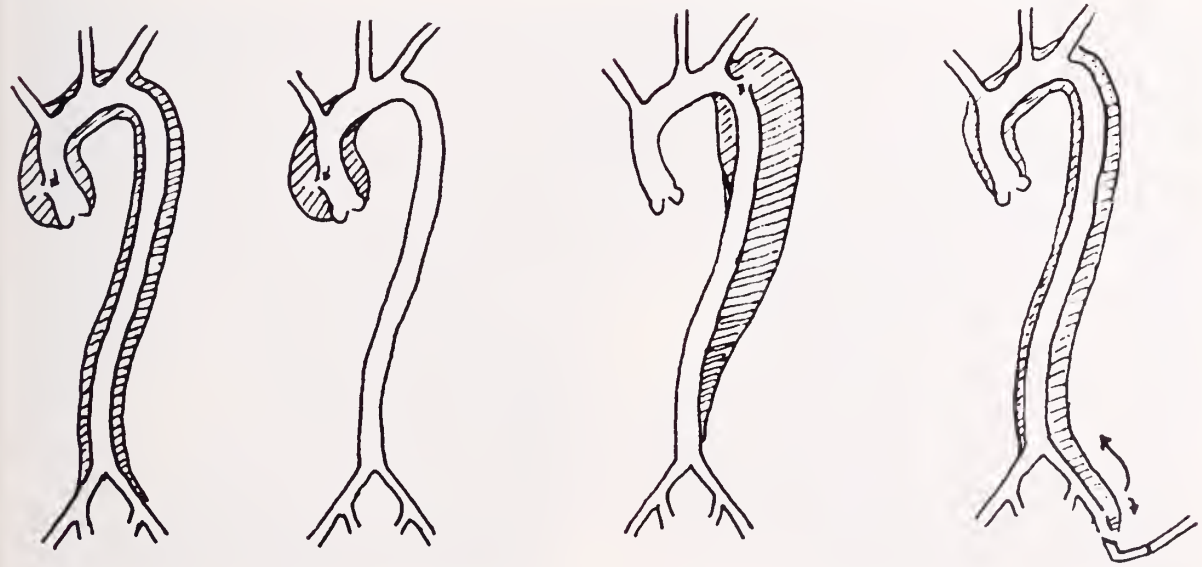

Figure 1. Classification of dissecting aneurysms of the thoracic aorta.

Treatment of Type III aneurysm will be dealt with in greater detail. It is not only the more common variety but may also frequently be managed in centers without facilities for cardiopulmonary bypass.

Asymptomatic fusiform aneurysms of the descending thoracic aorta should be followed by periodic physical examination and chest x-rays. Hypertension in these individuals must be treated vigorously and with strict control. Type III dissection should be managed by hypotensive therapy.

Surgical interference would be indicated under the following circumstances:

(1) Failure to respond to medical management as indicated by persistence of pain, enlarging shadow on x-rays, dropping hematocrit, shock, etc.

(2) Saccular aneurysms, because of high incidence of rupture.

(3) False aneurysms.

(4) Rupture into a pleural space or lung.

(5) Unstable, enlarging aneurysm despite adequate medical therapy.

(6) Occlusion of blood supply to a vital organ.

Medical Therapy

Early aortography is essential. It provides confirmation of diagnosis, helps in selection of the mode of treatment and provides relevant information should surgery become necessary later.

The patient is placed on strict bed rest in the Intensive Care Unit. Electrocardiogram, vital signs, C.V.P. and urine output are monitored closely. The head of the bed may be elevated to enhance the orthostatic effect of the drugs. An intravenous drip of Trimethaphan (Arfonad) 1-2 mg./cc. is started and titrated to maintain a systolic blood pressure of approximately 100 mm. Hg. Reserpine 0.5 to 2 mg. intramuscularly every four to six hours is started at the same time since patients become refractory to Arfonad in 24 to 48 hours. Guanethidine 25 to 50 mg. every 12 hours is also started. Sodium Nitroprusside (Nipride) is now available and may prove to be a more effective hypotensive agent. Patients do not become refractory to it and the drug is easy to control. Propranalol (Inderal) has been used with increasing frequency lately and appears to be quite effective. It reduces systolic thrust against the weakened vessel wall. Relief of pain and a stable hematocrit indicate success of the treatment. Once over the acute phase, patients must be treated intensively and followed closely. They may be maintained on Propranalol if well tolerated.

Surgery for Descending Thoracic Aneurysms

The Fenestration operations have been abandoned. An operation for this lesion must take care of the point of origin of the dissection. Resection with graft replacement is needed in most cases. Intraoperative perfusion of distal aorta is necessary to (1) reduce disturbance in

Figure 2. Patient W.K. From left, preoperative chest x-ray, aortogram, and postoperative chest x-ray.

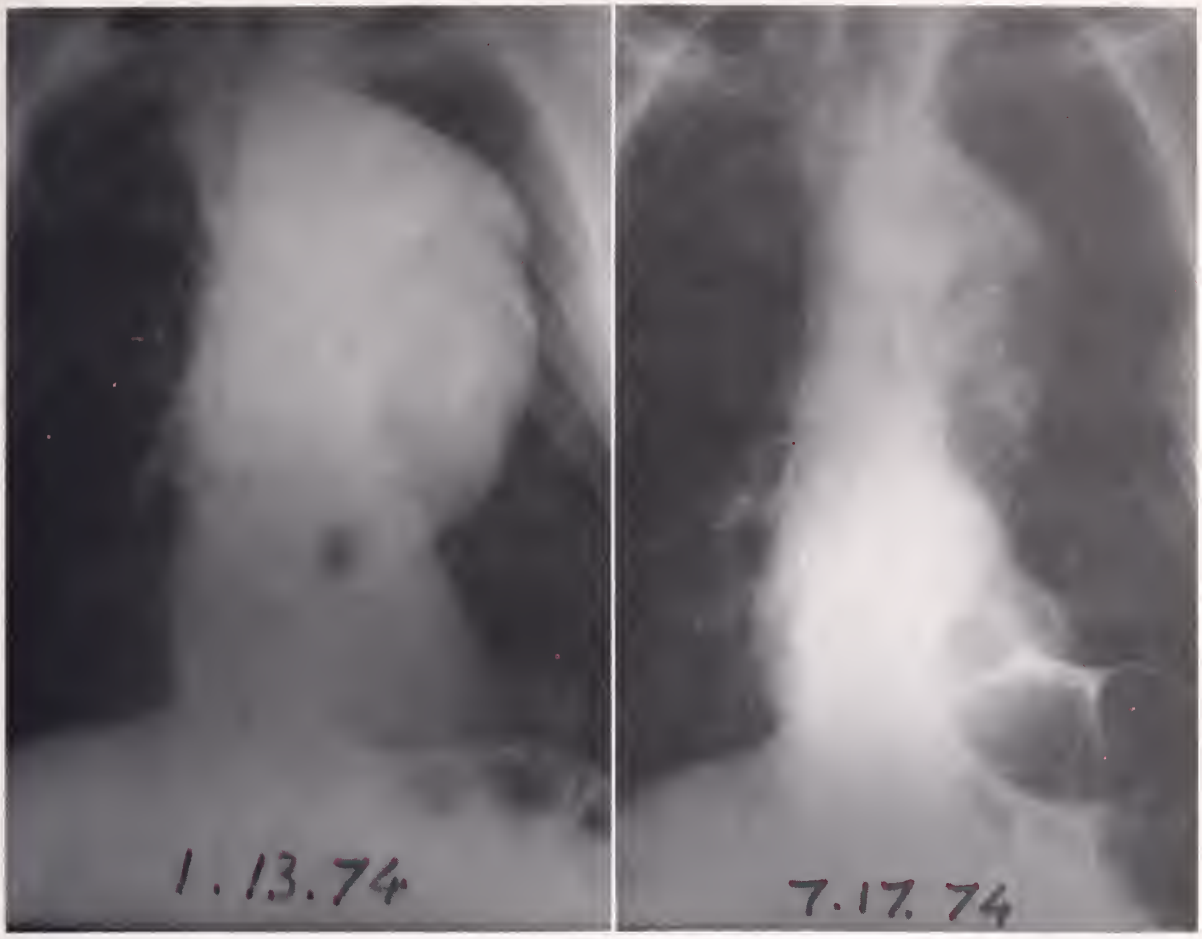

Figure 3. Patient O.B. From left, pre- and postoperative chest x-rays.

body metabolism, (2) provide some degree of protection to the spinal cord, and (3) protect the kidneys.

Attempts were made to repair thoracic aneurysms without distal perfusion under normo- and hypothermic conditions with unsatisfactory results. Various modalities of distal perfusion were then tried. At present, two techniques have given the most promising results: (1) Left atrium to femoral artery bypass which requires a perfusion pump but does not require an oxygenator, and (2) The TDMAC-Heparin coated temporary aorto-femoral shunt. The latter has the advantage of circumventing the need for systemic heparinization, which otherwise contributes greatly to mortality in this procedure. It also eliminates the problem of careful balancing of circulation between the upper and the lower parts of the body, inherent in atrio-femoral bypass.

The technique involves an extended left posterolateral thoracotomy through the fourth intercostal space, with the left chest elevated and the leg extended. The femoral artery is exposed in the left groin. The ascending aorta is exposed within the pericardium. Two concentric purse string sutures are placed in the aorta three to four centimeters from the aortic valve and passed through tourniquets. We have found a small transverse aortotomy easier to close later. A mattress suture over teflon pledgets may be inserted beforehand. A transverse stab is made in the center of the purse string sutures and one end of the shunt is quickly inserted. The shunt is allowed to fill with blood. The purse strings are tightened and the shunt is secured in place with multiple ties. The other end of the shunt is then inserted into the left common femoral artery through a transverse arteriotomy and secured in place. Any air bubbles in the shunt can be aspirated with a 25-gauge hypodermic needle. The aneurysm is not touched until the shunt is in place. Proximal and distal control is then achieved. Blood is seen rushing through the shunt as soon as the aorta is cross-clamped. Re-

TABLE I

Patient	*Age*	*Clinical Picture*	*Result*	*Remarks*
A.B.	77	Unstable dissection. Shock. No pain.	Died 24 hours after surgery	Neurological death
W.K.	71	"Infiltrate" left upper lobe. Hemoptysis. False aneurysm with rupture into the lung.	Survived	
D. J.	64	Two aneurysms identified at earlier exploration. Paper-thin wall at places.	Died	Bleeding from aortotomy site several hours postop.
O.B.	66	Enlarging aneurysm. Pain. Carried on medical therapy over a year.	Survived	Had successful resection of abdominal aortic aneurysm three months later.

section and grafting of the aneurysm is then performed at leisure.

Our experience with this technique is summarized in Table 1.

Though limited, our experience with this technique has been encouraging. In none of the cases was any clotting observed in the shunt. One neurological death was probably due to cerebral ischemia secondary to episodes of severe hypotension during induction. This patient had a history of stroke in the past. In none of the patients was any spinal cord or renal dysfunction noted.

Summary

Current approach to treatment of thoracic aortic aneurysms is outlined. Our own experience with surgery of descending thoracic aneurysms using the TDMAC-Heparin coated shunt is summarized.

A list of references may be obtained by writing The Journal.

Knowledge Of Food-Handling Lacking

CONSUMERS know too little about food handling, and one result is that some two million Americans get sick each year from food poisoning, according to a report in a recent issue of *Today's Health*, a magazine of the American Medical Association.

The foremost food hazard continues to be microbial poisoning, said Philip L. White, Sc. D., Secretary of the AMA's Council on Foods and Nutrition. The major cause of food-borne illness is faulty food handling, and commercial processors are less frequently answerable for food poisoning than are individuals in their homes, churches or camp kitchens, Doctor White said.

A common offender in food poisoning is an organism known as salmonella, found mostly in raw meats, raw poultry, eggs and dairy products. They can produce headache, vomiting, diarrhea, stomach cramps, and fever. The illness is often mistaken for the 24-hour virus. It is seldom fatal but can be serious for infants, the elderly and the chronically ill.

1975 Student Research Convocation West Virginia University School of Medicine

The Eleventh Annual Student Research Convocation was held on April 11, 1975. The first prize, an engraved medallion and a $100 cash award, was established in 1965 to honor Dr. Edward J. Van Liere, Dean Emeritus, for his leadership in bringing the School of Medicine to full stature, his devoted interest to students and his many scientific achievements. The second and third prizes were $50 and $25, respectively. Publication of the abstracts in *The West Virginia Medical Journal* constitutes important and much appreciated recognition of the students' efforts.

Roy L. Butcher, Ph. D., *Chairman*
Student Research Convocation Committee

The Trendelenburg Position And Its Use In Modern Surgery

Thomas S. Clark, Medicine IV

The Trendelenburg position, a surgical position popularized by Frederick von Trendelenburg in the 19th century, was widely accepted as a means of gaining greater exposure to the abdominal cavity. Although surgical and anesthetic techniques have greatly improved the ability to expose viscera and relax musculature, the persistent use of the tilt-down (Trendelenburg) position still remains popular today.

Radiographic evidence shows that a Trendelenburg tilt of 15° actually decreases the exposure to the lower pelvis by as much as 25 per cent. Aside from this graphic evidence, the Trendelenburg position alters normal function. Pulmonary tidal volume is decreased by 20 per cent, vital capacity by 14.5 per cent and minute ventilation by 13.9 per cent. Central venous pressure rises from a mean of 10 torr (supine) to as much as 50 torr depending on the rapidity and degree of tilt. While peripheral blood pressure may show little alteration, a 30° tilt may reduce carotid blood flow by 21.5 per cent and during hemorrhage a fourfold reduction can be seen. Cerebral edema, increased intraocular pressure, retinal detachment, brachial plexus damage, pulmonary aspiration, and deep vein thrombosis are other complications that may also be associated with the use of this position.

The role that the Trendelenburg position plays in increasing operative and postoperative morbidity and mortality may be significant. The physiologic status of the patient should be thoroughly evaluated and the benefits of the Trendelenburg position objectively explored before the patient is subjected to this stressful situation.

The Posterior Hypothalmic Copulatory Site: Anatomical Considerations

Rick Francke, Medicine I

Monopolar stimulating electrodes were implanted in the medial forebrain bundle at the level of the premamillary nucleus to elicit stimulation bound copulatory behavior in male rats. Small lesions were then made by passing direct current through the tip of the stimulating electrode. A modified Fink-Heimer method was used to stain selectively degenerating axons emanating from the lesion site. The projections traced were then examined in an effort to find anatomical relations between the posterior copulatory site and other neural structures involved in male sexual behavior. Such connections were found to exist in the olfactory peduncle, the stria terminalis, the mamillary bodies, and the hippocampus. No communication was observed to extend into the only other known stimulation bound copulatory site, the medial preoptic region.

Evaluation Of Triazolam, Flurazepam, And Placebo As Hypnotic Agents In Presurgical Patients

George Linsenmeyer, Medicine II

This double blind study compared the hypnotic effects of Triazolam (U-33,030-a tricyclobenzodiazepine derivative) 0.5 and 1.0 mg., flurazepam 30 mg. and placebo.

The sample consisted of 120 inpatients, between the ages of 18 and 60, randomly selected from a group of surgical patients (American Society of Anesthesiologists Risk Classes I and II—healthy patients), to whom the drug was given the night before surgery. Each drug or placebo was packaged in identical capsules and bottles. Each bottle had a tear-off label so that its contents could be identified in case of emergency.

Each patient was interviewed to determine his normal sleeping pattern as well as if any sleeping problem was present. A brief history and physical examination was performed to determine the general health of the patient and to exclude any patient with a major systemic illness (i.e., diabetes, hypertension, etc.). The patient was also asked about his daily consumption of coffee, tea and cigarettes.

The day following the administration of the study drug the patient was interviewed as to his previous night's sleep. The parameters measured were: onset of sleep, duration of sleep, number of awakenings, quality of sleep, satisfaction with medication and side effects.

A success in therapy was defined as falling asleep in less than 30 minutes and sleep of more than six hours duration. Placebo was a success in seven of 30 patients; flurazepam 30 mg. in 15 of 30 patients; triazolam 0.5 mg. in 20 of 31 patients, and triazolam 1.0 mg. in 21 of 29 patients. At $p = 0.032$, flurazepam 30 mg. statistically was not significantly different from placebo in terms of success. Triazolam 0.5 mg. and 1.0 mg. each were statistically better than both flurazepam and placebo, in terms of onset of sleep.

The total number of side effects from each drug was very small and all were rated as mild.

The Effect Of Glucagon On Free Fatty Acids In Alcohol Withdrawal

Gary D. Marano and Rocco A. Morabito, Medicine III

The effect of glucagon on free fatty acids (FFA) was studied in dogs which were withdrawn from alcohol intoxication.

Three normal dogs were given alcohol by gastric intubation twice daily (4 gm/kg for 2 days and 6 gm/kg for 8 days). FFA were measured before alcohol was administered and on day 7. Alcohol was withdrawn on the tenth day; fourteen hours later 1 mg. glucagon was given intravenously (IV) to each dog. FFA were measured at 12, 13, 14, 14.5, 15, 16, 18, 20, 22 hours after withdrawal. In a second study, 1 mg. glucagon was given subcutaneously (SC) to each dog at 14, 15 and 16 hours after withdrawal, and FFA were measured at 12, 13, 14, 14.5, 15, 15.5, 16, 16.5, 17.5, 18.5, 19.5, 20.5 hours.

FFA prior to administration of alcohol averaged 278.6 uEq/L (IV) and 498.3 uEq/L (SC). On day 7, FFA averaged 1030.6 (IV) and 680.0 (SC). The average FFA before glucagon injection was 667.11 ± 331.87 (IV) and 713.22 ± 222.38 (SC). The average of the FFA fractional change 30 minutes after glucagon injection was $-.51 \pm .13$ (IV) and $-.59 \pm .25$ (SC). This decrease in FFA within 30 minutes was the maximum. Thus, FFA decreased on an average of 51 per cent (IV) and 59 per cent (SC) after glucagon injection. Both decreases were significant at $P \leq .05$ when compared to the mean fractional change before injection.

In the IV study, FFA returned to pre-glucagon levels within two hours and continued to increase to approximately two times the average pre-glucagon FFA levels. In the SC study, although glucagon was given in three separate 1 mg. doses, one hour apart, a similar rebound FFA

effect was noted after the last dose. There appeared to be no difference in the effect of glucagon on FFA whether given IV or SC.

This study shows that glucagon is capable of decreasing elevated FFA in dogs withdrawn from alcohol intoxication. Elevated FFA may be the problem of alcohol withdrawal and an associated Mg ion deficiency, with FFA acting to chelate Mg. It is felt that glucagon acts to lower FFA because it has the ability to stimulate hepatic glycogenolysis and gluconeogenesis, which increases glucose and subsequent insulin secretion. Alcohol withdrawal represents one of the many conditions of stress in which FFA are elevated, e.g., arrhythmias in myocardial infarction, delirium tremens in surgery, sudden death in alcoholism, sudden "crib deaths," affective disorders, etc.

Androgen Assimilation, Cytoplasmic Binding, And Endogenous Concentration In The Male Guinea Pig

Frank L. Schwartz, Medicine I

Endogenous concentrations of testosterone (T) and dihydrotestosterone (DHT) have been measured by radioimmunoassay in the plasma and various tissues of the male guinea pig. Comparisons have been made between the *in vivo* and *in vitro* assimilation of T-H^3, the nature of DHT-H^3 binding to cytoplasmic androphiles, and the endogenous concentration of T and DHT in these tissues. Tissues examined included skeletal muscle, adrenal, liver, testis, prostate and seminal vesicle. Particular attention was given to the seminal vesicle due to the fact that the epithelium and muscle can be surgically separated for individual analysis. Of all tissue examined, the testis contained the highest endogenous concentration of T, but contained very little DHT. Within the sex accessory tissues examined, the seminal vesicle epithelium contained the highest concentration of either T or DHT. Both steroids were present in approximately equal concentrations in the seminal vesicle epithelium. The seminal vesicle epithelium also exhibited the greatest capacity to form DHT-H^3 from T-H^3 both *in vivo* and *in vitro* and the highest degree of total and specific binding of DHT-H^3 to cytoplasmic androphiles. The prostate and muscle of the seminal vesicle both contained approximately one-half the endogenous concentration of DHT found in the epithelium of the seminal vesicle. Endogenous T and DHT was slightly higher in the prostate than muscle. The prostate exhibited a slightly greater ability to form DHT-H^3 from T-H^3 both *in vivo* and *in vitro* than the muscle of the seminal vesicle. The degree of specific binding of DHT-H^3 in the cystosol of the prostate significantly exceeded that of the muscle. The gastrocnemius muscle contained significant concentrations of endogenous T, but contained only basal levels of DHT; the tissue possessed little capacity to either form DHT-H^3 *in vivo* and *in vitro* or to bind DHT-H^3 specifically in the cystosol. Thus it appears that in these tissues their inherent ability, or lack thereof, to form or bind DHT correlates with the endogenous concentration of DHT.

Isolation Of Tumor-Associated Antigen From Lung Cancer Tissue Cultures

Ellen Shaw, Medicine I

Tumor cells are known to produce "markers," such as hormones, fetal antigens, enzymes, and membrane-bound antigens not found in their normal counterparts (Primack, 1974, *Sem. in Oncology*, 1:235). Such macromolecules may be useful in the diagnosis and treatment of cancer. These studies involve the isolation and identification of such tumor-associated antigens (TAA) from tissue cultures derived from human lung tumors.

Numerous protein extraction-separation techniques were utilized to investigate this possibility. Human lung cancer tissue culture cells (LC-549) obtained from Dr. J. Fogh of the Sloan-Ketter-

ing Institute for Cancer Research were used in our research. Also, lung tumor and paired non-tumor tissues as well as human embryonic lung and normal tissue were studied for control and comparative purposes. In order to assess the similarities and differences in the LC-549 cells and above mentioned control tissues the following protocol was performed. Tissue culture cells (LC-549) were grown in large roller bottles on a RC-42 Rollacell unit at 37° until the entire bottle was completely sheeted. The cells were harvested and disrupted using a freeze-thaw protocol and differential centrifugation. Likewise, the tissues were disrupted by homogenization. A 100,000 xg soluble supernatant and particulate fraction were generated using the Beckman LS-65 ultracentrifuge. Ammonium sulfate fractionation with 20 per cent, 50 per cent, and 80 per cent cuts as well as the Reineckate precipitation method for basic proteins were performed on the 100,000 xg soluble supernatant. Chemical solubilization of the 100,000 xg particulate fraction was performed using 3MKCL, lithium diiodosalicylate and Triton-X100. Subsequently, several of the above extracts were subjected to disc and/or slab polyacrylamide gel electrophoresis and compared to identify differences.

The results of protein separation technology indicate marked differences between LC-549 and tumor tissue as compared to normal lung tissues, in the 50 per cent ammonium sulfate precipitates. Immunoassays to establish antigenic differences and specificity of such reactions were also performed. If these unique proteins are confirmed as lung tumor-specific they would be useful in developing immunodiagnostic assays.

This work was supported by a fellowship from the American Cancer Society from Dr. Alvin Watne and Lung Cancer Contract NO1-CB-43890. It was carried out under the direction of Dr. Robert W. Veltri.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (not onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original or retain same in the event the manuscript is lost in transmittal.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for cuts should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it. The author will bear the cost of all over two one-column halftone cuts.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Special Article

Bicentennial Of Digitalis

Edward J. Van Liere, M. D., Ph. D.

THE year 1975 marks the bicentennial of Dr. William Withering's classical studies on the clinical action of digitalis. Withering (1741-1799) graduated from the University of Edinburgh in 1766 with the degree of Doctor of Physic and shortly after started his practice in Shropshire, England. He wrote, "In the year 1775 my opinion was asked concerning a family recipe for the cure of dropsy." He learned that the recipe had been kept a secret by an old woman in Shropshire, who often cured dropsy after the regular practitioners had failed. Withering obtained the recipe and found it was composed of about twenty herbs, but claimed that he had no difficulty in finding that the active herb was foxglove. The old woman could not have confided her secret to a more discerning or better qualified person to test the clinical action of this useful preparation.

Digitalis or foxglove has been known for many centuries and was mentioned by Welsh physicians as early as 1250. The use of the plant was known by some of the medieval herbalists and was recommended in the German and English printed herbals of the 16th and 17th centuries. In George Eliot's *Silas Marner* (a story which refers to a period around 1750) it is mentioned as a folk remedy. It was botanically described in 1542 by Fuchsuis, who named the plant *Digitalis purpurea*. The name is derived from the German word "fingerhut" (thimble) because of the shape of the blossoms and the fact that they are usually purple—although sometimes they are white. It is a beautiful plant and easily grown. The active principle is found in the leaves.

Dr. William Withering, the first man to study carefully the clinical action of digitalis, has been described as not only an admirable observer of the English school, but as a man of unusual versatility (Garrison, F. H., *History of Medicine*, p. 39, W. B. Saunders Co., Philadelphia, 1924). He was considered one of the greatest medical botanists and was wittingly called "the flower of physicians." In 1776 he wrote an authoritative two-volume work, "Botanical Arrangements of all the Vegetables Naturally Grown in Great Britain with Descriptions of the Genera and Species According to Linnaeus." This was considered a masterpiece. Besides his interest in medical botany, he made analyses of minerals and mineral waters and identified barium carbonate which was named in his honor "witherite." He was also a breeder of Newfoundland dogs and French cattle.

The Author

- **Edward J. Van Liere, M. D., Ph. D., Emeritus Dean and Emeritus Professor of Physiology and Biophysics, West Virginia University School of Medicine, Morgantown.**

Doctor Withering was, moreover, an astute and observing physician. He described the epidemics of scarlatina and scarlatinal sore throat in 1771 and 1778, and in 1793 wrote a learned essay on pulmonary tuberculosis, a disease from which he suffered. He served as a consultant over a wide area of middle England and Wales. Doctor Withering apparently was highly regarded in Birmingham and became a member of the "Lunar Society;" among the members of this famous group were James Watt, Josiah Wedgwood, Dr. Erasmus Darwin, and Joseph Priestley. In sum, it may be seen that he was an outstanding man. He died of pulmonary tuberculosis in 1799 at the age of 58.

With his splendid clinical background Doctor Withering was well prepared to investigate the action of digitaliis on dropsy. In 1775 he commenced immediately to try foxglove on his heart cases and on the whole obtained satisfactory results. These studies were started while he was practicing in the small town of Stafford, and when he moved to Birmingham in the same year he continued his observations. Digitalis was introduced in the Edinburgh Pharmacopeia in 1783.

In 1785, ten years after he had started his studies on digitalis, he wrote a long treatise entitled, "An Account of the Foxglove, and some of its Medical Uses; With Practical Remarks on Dropsy and Other Diseases" (London, 1785, C. J. G. and J. Robinson. Reprinted in *Medical Classics*, 2: 305, 1937). This treatise is considered one of the classics of medicine. He wrote it largely because digitalis was being used indiscriminately

and often in excessive doses. As a result a loud cry was raised against its use. Withering believed it to be a worthwhile drug and that if definite preparations and doses could be determined, the preparation would eventually have a valuable place in medicine. In this belief, of course, he proved to be entirely correct.

The original volume of the above named treatise contained 207 pages, and also included a preface and introduction. The following topics were discussed: Introduction of the foxglove into modern practice; accounts of patients (163 cases) he had treated with digitalis; other correspondent cases (55); preparations and doses of digitalis; effects, rules and cautions; and practical remarks on dropsy. He stated in his treatise, "It has a power over the motion of the heart, to a degree yet unobserved in any other medicine, and that this power may be converted to salutary ends." Withering sums up his knowledge of the use of digitalis as follows: "Let it be continued until it acts either on the kidneys, the stomach, the pulse, or the bowels; let it be stopped upon the first appearance of any one of these effects, and I will maintain that the patient will not suffer from its exhibition, nor the practitioner be disappointed in any reasonable effects." Apparently he was well pleased with the therapeutic actions of the drug.

Although Doctor Withering knew that the drug had some effect on the heart, he did not appreciate its profound effect on this organ. He believed that the increased secretion of urine produced by digitalis in dropsical conditions was caused by its action on the secretory epithelium of the kidney. The same view was held by other physicians for many years. Finally, John Ferriar, in 1799 (the year Doctor Withering died), ascribed to digitalis a primary action on the heart and released its diuretic effect to a position of secondary importance.

In the early years, as previously mentioned, digitalis was used internally or locally for many different diseases, such as nervous disorders and even for skin lesions. Although in 1785 Withering reported the benefits to be derived from the proper use of digitalis, in many instances his advice was not heeded. This lack of discriminate use lasted pretty much throughout the 19th centuring and was prescribed often in toxic doses. It has been pointed out by Moe and Farrah (Goodman and Gilman, *The Pharmacological Basis of Therapeutics*, p. 698, Macmillan Co., New York 1970, 4th ed.) that during the first half of the 20th century several outstanding scientists, among them Arthur R. Cushny, James Mackenzie, and Thomas Lewis, made careful clinical observations on digitalis and it became gradually to be looked upon as a specific in the treatment of atrial fibrillation. Moe and Farrah point out, however, that only during the last 50 years has it become firmly established that the main value of digitalis is in the therapy of congestive heart failure.

This is not the place to give in any detail the various clinical uses of digitalis. This material may be found in a textbook of pharmacology or textbook of medicine. Moe and Farrah (Ibid p. 680) have summed up the matter well: "The main pharmacodynamic property of digitalis is its ability to increase the force of myocardial contraction." In essence, it is an invaluable and widely used therapeutic agent and a boon to many people who suffer from cardiac disease.

The author of this article wishes to emphasize that the clinical action of digitalis was worked out by a man who practiced medicine in a small town. Doctor Withering was entirely on his own and did not have the benefit of receiving any help from an outstanding hospital or clinic or a center of medical education; there was none available in his immediate vicinity and, actually, he practiced in what may be regarded as a rather isolated community. One is reminded of other meritorious doctors who worked in isolated areas and made valuable contribution to medicine. In this connection two men come to mind, both citizens of the United States; Dr. William Beaumont made his famous studies on gastric physiology in the wilds of northern Michigan and Wisconsin. Dr. George E. Goodfellow, who practiced in Tombstone, Arizona Territory, a harsh and desolate land, in the 1880's, made valuable contributions to the surgery of the prostate gland. It is true that Doctor Withering lived in an environment much more congenial than those in which Doctor Beaumont and Doctor Goodfellow lived, but he did reside in a relatively isolated area.

Perhaps the inference may be drawn that an individual who has an inquiring and creative mind is often able to make worthwhile contributions regardless of his environment. Indeed, one is led to wonder whether the climate created by isolation, and even a certain amount of harshness, may not be capable of stimulating the creative imagination.

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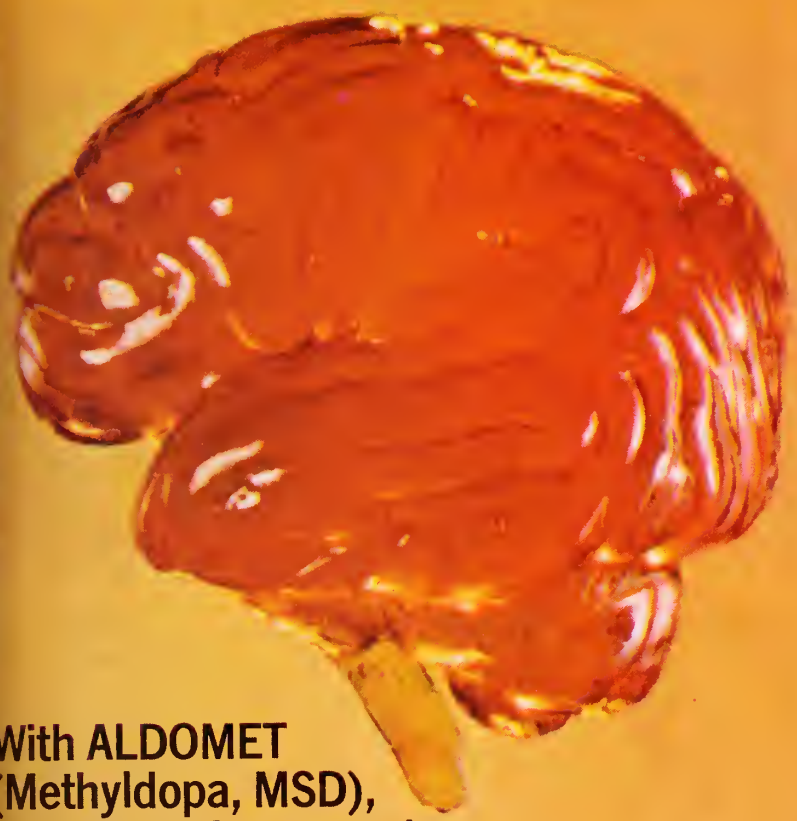
ALDOMET has no direct effect on cardiac function. When ALDOMET is used in effective doses cardiac output is usually maintained with no cardiac acceleration; in some patients the heart rate is slowed



With ALDOMET (Methyldopa, MSD), symptomatic postural hypotension is infrequent

ALDOMET reduces both supine and standing blood pressure. Less frequent symptomatic postural hypotension is experienced with ALDOMET than with many other antihypertensive agents. Exercise hypotension and diurnal blood pressure variations rarely occur.

for hypertension

TABLETS, 250 mg, 500 mg, and 125 mg

ALDOMET®
(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

MSD
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For a brief summary of prescribing information, please see following page

addendum

MSD
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to further simplify therapy for many patients

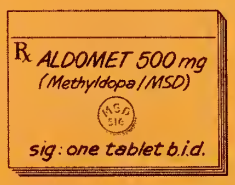
now available
ALDOMET® 500 mg
(METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

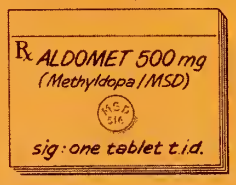
Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

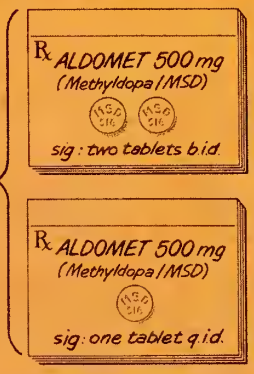
1.0-g daily dose =



1.5-g daily dose =



2.0-g daily dose =



NOTE: Tablets shown are not actual size.

in hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity.

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa. If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia Periodic blood counts should be done during therapy to detect hemolytic anemia It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued Usually the anemia remits promptly. If not, corticosteroids may be given and other causes of anemia should be considered. If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood In the absence of hemolytic anemia, usually only the direct Coombs test will be positive A positive direct Coombs test alone will not interfere with typing or cross matching. If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur Patients should be followed carefully to detect side reaction or unusual manifestations of drug idiosyncrasy

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings) May interfere with measurement of uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods. Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported This will interfere with the diagnosis of pheochromocytoma It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery Methyldopa is not recommended for patients with pheochromocytoma Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites.

Stop drug if involuntary choreoathetotic movement occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors. Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by the procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness; symptoms of cerebrovascular insufficiency; paresthesias, parkinsonism, Bell's palsy, involuntary choreoathetotic movements; psychic disturbances including nightmares and reversible mild psychoses or depression

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.)

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, skin rash.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000. Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

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January 30 - February 1

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Watch The Journal For Program Details

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category I credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

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Please register me for the Ninth Mid-Winter Clinical Conference in Charleston, W. Va., January 30 - February 1, 1976. My $15 registration fee is (is not) enclosed.

I will attend sessions at 2 P. M. Friday, January 30 ..... 8 P. M. Friday ..... 9:30 A. M. Saturday, January 31 ..... 2 P. M. Saturday ..... 9:30 A. M. Sunday, February 1 ..... All sessions .....

Name (please print) _____ *Specialty* _____

Address _____ *City* _____

A message from . . .

The President

SPRINKLE, SPRINKLE LITTLE STAR—

THE pun is intended (with apologies to my English professor) to commend our outstanding 1975 Program Chairman, Dr. Philip M. Sprinkle, for producing a diversified, delightful and thought provoking program for our annual Greenbrier meeting.

A special mention must go to his keynoter, Congressman Harley O. Staggers, who spoke with much insight and inspiration and whose references to Godliness and physicians were refreshing coming from "the man in Washington."

Dr. William E. Gilmore continued his "one-upmanship" style by delivering perhaps the best and most meaningful Presidential address of our times.

The presence of Dr. Max H. Parrott, President of the AMA, and his wife, lent another hallmark and added more to our already prestigious meeting. It is good to know that "someone up there" is listening.

Of course our annual meeting at the beautiful Greenbrier could not possibly be coordinated smoothly without the efforts of our capable Executive Secretary, Charlie Lewis, and his ever helpful and efficient staff.

On a negative note, it was disappointing to see that no less than six of our component societies were *not* represented at the House of Delegates sessions. If we are to communicate, unify, legislate and promote our philosophy, it must be done with input from West Virginia's 55 counties. There are on the horizon several significant way-of-life medical problems which can only be solved in our interest if we stand united and unsplintered.

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

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EDITORIALS

BICENTENNIAL OF DIGITALIS

Elsewhere in this issue of *The Journal* may be found an article concerning the bicentennial of clinical studies on digitalis by William Withering (1741-1799), who practiced in Shropshire, England. In 1775, he learned from an old woman in Shropshire about a secret recipe which was said to cure dropsy. He found that this recipe contained foxglove, or digitalis, and immediately tried it on his heart cases who suffered from dropsy and obtained beneficial results.

It is noteworthy that Doctor Withering made his classical studies while practicing in a small town, and did not have access to a large well-equipped hospital or to a center of medical education. He was not only an astute clinician but a versatile man of manifold interests; for example, barium carbonate which he discovered is called "witherite" in his honor. Other honors were awarded him during his lifetime.

Doctor Withering enjoyed a wide consultation practice in Western England and in Wales, and is said to have covered over 6,000 miles in carrying out his consulting services. This all happened, of course, before the advent of the automobile and he had to rely for transportation on a horse-drawn carriage. Unfortunately, he did not have a rugged constitution and suffered from pulmonary tuberculosis most of his life, dying from this disease at the comparatively early age of 58. Doctor Withering must be considered an unusually gifted man; he was highly regarded in Birmingham and was associated with world-renowned men, such as James Watt, Josiah Wedgwood, Dr. Erasmus Darwin and Joseph Priestley.

Much research work has been done on digitalis since Doctor Withering made his classical studies 200 years ago, but there is still much to be learned about it. It is heartening to know that digitalis is presently being studied in many laboratories and medical clinics throughout the world. It is to be hoped that these studies throw further light on the exact mode of action of this extremely important drug.

RETINAL HEMORRHAGE AT ALTITUDE

Recently three articles appeared in the Archives of Ophthalmology (Vol. 93, June, 1975) concerning the effects of high altitude on blood vessels of the retina. It has been known for many years that hypoxia causes retinal vessels to dilate. In 1940 Cusick et. al.[1] found that at simulated altitudes from 16,000 to 19,000 feet (about 4,887 to 5,791 meters) the diameter of retinal vessels increased 10 to 20 per cent, the veins dilating more than the arteries. Duquet et. al.[2] in 1947, using a decompression chamber, subjected 14 men between the ages of 18 and 38 to altitude and observed enlargement of the reti-

nal vessels at elevations as low as 13,199 feet (about 4,000 meters) and dilation, which reached its maximum at 19,700 feet (about 6,000 meters). Dammert[3] early observed that subjects suffering from altitude sickness showed dilation of the retinal capillaries.

In view of these facts it is no wonder that clinicians have recently observed disturbances of the blood supply in the retina at altitude; indeed, it is surprising that they have not been made earlier. Rennie and Morrisey[4] studied the eyegrounds of 15 experienced American climbers, all of whom were physically fit, and five Nepali Sherpas (men of Tibetan extraction who live in the region of Mt. Everest) who climbed Dhaulagiri, 26,795 feet (8,167 meters) in the central Himalayas, the sixth highest mountains in the world. Retinal photographs were taken at sea-level, before the participants started to climb the mountain, and were repeated at high altitude, after the climbers had subjected themselves to extreme physical exertion. Ocular changes were noted in all of the American climbers; vascular engorgement and tortuosity of the vessels occurred and five of the American climbers experienced retinal hemorrhages. The Sherpas showed no ocular vascular changes.

Wiedman[5] reported marked changes in retinal vessels in four subjects who had been exposed to altitudes varying from 16,000 to 19,200 feet (4,887 to 5,853 meters). He observed localized macular, diffused retinal hemorrhage, and by means of ophthalmodynamometry showed vascular hypertension at altitude. Shults and Swan[6] reported on the ill-fated expedition (originally consisting of eight members) of Mt. Aconcagua in the Argentine Andes (22,834 feet — 6,921 meters), the highest mountain in the Western Hemisphere. Four of the surviving six members had retinal hemorrhages and two of the men experienced permanently disturbed vision. Two members of the expedition were lost, presumably due to cerebral edema.

The cause of retinal hemorrhage at altitude is not fully understood. It is thought that the accompanying cerebral edema compresses the retinal vessels; another factor is the presence of a secondary polycythemia with increased blood viscosity; also the effect of hypoxia on the vessels is to be considered. Other causes, such as the role of ozone have been mentioned. Several factors probably are involved. It should be emphasized that the vast majority of retinal hemorrhages produced by altitude absorb spontaneously without loss of visual acuity. Unfortunately, however, a few are not completely absorbed, so that permanent damage may occur. Hemorrhages in the macular area are, of course, the most damaging.

It is noteworthy that none of the Sherpas showed signs of retinal vascular changes; these men were highly acclimatized. It would seem that it is theoretically possible that if mountain climbers acclimated themselves more thoroughly, there might be somewhat less danger of retinal hemorrhage. The entire matter needs more investigation.

Finally, a hypothetical question may be asked. Do men who walk up to Pike's Peak (elevation over 14,000 feet), and who are often not well acclimatized or in good physical condition, suffer from retinal hemorrhages? The writer of this essay knows of no data on this subject.

1. Cusick, P. L. et. al. Proc. Mayo Clinic 15: 500, 1940.
2. Duquet, J. et. al. J. Aviation Med. 18: 516, 1947.
3. Dammert—cited by Monge. 1929.
4. Rennie, D. and J. Morrisey. Arch. Ophthal. 93: 395, 1975.
5. Wiedman, M. Ibid. p. 401.
6. Shults, W. T. and Swan, K. C. Ibid. p. 404.

TOXIC EFFECTS FROM INNOCUOUS SNAKES

A recent study has disclosed that of the 45,000 cases of snakebite which occur in the United States every year, 37,000 are attributed to nonvenomous snakes.[1] While the greatest concerns among physicians are those instances of envenomation by poisonous serpents, little attention is given to those species generally regarded as innocuous. The literature of herpetology relates many cases of severe reaction to bites of so-called harmless species,[2,8] whose clinical features run the symptomatic spectrum from local hemorrhage and infection to lymphangitis and axillary node enlargement, and to delayed, extensive and prolonged superficial hemorrhage due to a profound defect in the normal clotting mechanism. Neurological effects such as loss of motor function and syncope have also been reported. While the majority of the serpents which inflicted these injuries were of foreign origin, three cases were attributed to species found in North America, one of which, the Eastern Hognose Snake, *Heterodon platyrhinos,* is endemic to West Virginia.

The Eastern Hognose is typical of these "harmless" snakes in that it does not possess the hypodermic envenomation apparatus common to venomous species. The system of delivery is an enlarged, grooved pair of rear teeth which are used to hold their prey while the saliva seeps into the wound via the grooves. Thus, the envenomation technique employed by these animals is more primitive than that of those known to be highly venomous and requires that the animal's

teeth be in contact with the victim for a greater period of time for envenomation to be effective.

Envenomation by the Hognose Snake has resulted in a prickling sensation, an itch, edema, and subcutaneous hemorrhage confined to the area of envenomation. While these wounds were painful and tender, the symptoms subsided after a few days without medical intervention. The localized hemorrhage suggests a hemotoxic property of the saliva from this snake. That these effects were attributable to the Hognose Snake's saliva has been questioned by one study.[9] Extracts of the saliva injected into mice had little effect and since they received, without serious result, a higher concentration of the hemotoxin than they would in nature, it is questionable whether these snakes could envenomate a man with the results described above. While there is some uncertainty as to whether the victims in the reported cases were indeed reacting to the toxic qualities of the saliva, nonetheless, bites by this reptile should be regarded as potentially venomous.

While the majority of the species mentioned in the cases reported are not endemic to this country, many of them are available to collectors through mail order dealers. Thus, these species may find their way into the hands of a serpent collector who believes he has a harmless pet and handles it as such. Indeed, live venomous snakes are available through these dealers. Clearly, some measure of control must be exerted to prevent needless injury with the potential for fatality.

The common water snakes of the genus *Natrix* have also been reported to possess a toxic saliva.[4] Many residents of West Virginia report the Water Moccasin or Cotton Mouth in the State, and many present themselves as the victim of Cotton Mouth bites. It should be noted, however, that this snake has never been reported in West Virginia in the herpetological literature, the closest locations reported being eastern Virginia and western Kentucky.[10] The Northern Water Snake, *Natrix sipedon*, has much the same appearance and habitat as the Cotton Mouth, and its vicious disposition makes it formidable to encounter in the woods. Thus, many encounters with this water snake may be erroneously ascribed to the Cotton Mouth. Conant's *Field Guide* has an excellent series of plates depicting venomous and non-venomous snakes in the State and would be a useful tool in the physician's office or emergency department in aiding the snakebite victim in identification of the species which caused his injury. Indeed, if all non-venomous snakes (but with features of envenomation) which cause injuries were properly identified, a more rational, specific plan of treatment could be employed, reducing the risks of antivenom therapy needlessly instituted.—*Guest Editorial by Clement L. Counts, III, Department of Biological Sciences, Marshall University, Huntington, West Virginia.*

A list of references may be obtained by writing The Journal.

The Mourning Period Of Parents Of Handicapped Child

All parents go through a mourning period after the birth or identification of a handicapped child. It usually has three stages—shock, then disbelief, and finally acceptance. Parents seldom progress smoothly through these stages, however, according to an article in a recent issue of *American Family Physician*, scientific publication of the American Academy of Family Physicians.

The article, "Genetic Counseling," was written by Mark Degnan, M. D.; June Peters, M. S.; Ian H. Porter, M. B.; and David M. Gottesman, M. D., of Albany Medical College of Union University, Albany, New York.

The authors say that parents of handicapped children often go through periods of denial "during which they will deny the diagnosis or deny their own feelings about the implications" of the diagnosis. Such parents become extremely knowledgeable about their child's medical condition but "fail to come to grips with its emotional implications."

Some parents are unable to accept the medical facts told to them and shop around for a professional person who will tell them what they want to hear.

Possibly the most damaging response to mourning, however, is the sequence of depression-rejection-overprotection. The authors state, "It is normal and appropriate for the parents of a handicapped child to have negative feelings. When parents do not understand this, they feel guilty and begin to overprotect their child."

Overprotection makes the parents feel as though they have some measure of control over what is a difficult and frightening situation but "it also keeps the youngster at an infantile level and blocks his development in areas where he may not be handicapped."

The authors say that all parents and families of handicapped children should seek genetic counseling. Technically, genetic counseling is the process of explaining to parents the inherited aspects of disease. But, an essential part of genetic counseling consists of helping families deal with the feelings that result from inherited disorders.

There are more than 1,000 identified genetic disorders and at least another 1,000 known conditions that probably have a genetic cause. It has been estimated, the authors say, that 250,000 children are born in the United States each year with significant congenital or inherited abnormalities.

GENERAL NEWS

Doctor Leckie Assumes Presidency Of State Medical Association

Dr. Jack Leckie, a Huntington family physician who is Director of Emergency Services of St. Mary's Hospital, was installed by the West Virginia State Medical Association as its President at the concluding session of the House of Delegates during the 108th Annual Meeting Saturday, August 23, at The Greenbrier in White Sulphur Springs.

The convention began with Council and House of Delegates sessions on Wednesday, August 20. Registration totaled 566 and included 299 physicians.

Doctor Leckie was installed by Dr. William E. Gilmore of Parkersburg, the retiring President, who had delivered the traditional President's address a few minutes earlier. The text of the address appears in the scientific section of this issue of *The Journal.*

Doctor Gilmore automatically became Chairman of the Council for the new Association year, succeeding Dr. A. Thomas McCoy of Charleston.

Other New Officers

Elevated to President Elect from Vice President was Dr. John J. Mahood, a Bluefield dermatologist, who will assume the Presidency at the 1976 meeting, also scheduled at The Greenbrier next August 18-21.

Dr. Joseph A. Smith of Dunbar was elected Vice President and Dr. Kenneth G. MacDonald of Charleston was re-elected to his 11th one-year term as Treasurer. Doctor Smith is a family physician and Doctor MacDonald is a surgeon.

Dr. Frank J. Holroyd of Princeton was re-elected as a Delegate to the American Medical Association, with Dr. George R. Callender, Jr., of Charleston, re-elected as an Alternate Delegate.

One new Council member was named, with six other physicians re-elected to two-year terms. Dr. L. Walter Fix of Martinsburg, appointed by Council in 1974, was elected to the second year of the current Fourth District term. The new member elected was Dr. Robert J. Nottingham of Morgantown.

Re-elected were Drs. Robert R. Weiler, Wheeling; Robert W. Bess, Jr., Piedmont; Robert D. Hess, Bridgeport; Louis W. Groves, Jr., Richwood; J. L. Mangus, Charleston; and David F. Bell, Jr., Bluefield.

Holdover Councilors whose terms will expire in 1976 are Drs. Robert G. Janes, Fairmont; L. H. Nefflen, Elkins; Lyle D. Vincent, Parkersburg;

In the left photo, Dr. Jack Leckie, right, Huntington, is congratulated by Dr. William E. Gilmore, Parkersburg, Immediate Past President, following Doctor Leckie's installation as President of the West Virginia State Medical Association during the second session of the House of Delegates at the Association's 108th Annual Meeting; in the right photo are, from left, Drs. A. Reynolds Crane, President of the Pennsylvania Medical Society; Max H. Parrott, President of the American Medical Association, who was an honor guest and speaker for the first session of the House of Delegates; Hoyt D. Gardner, President of the Kentucky Medical Association; and Frank J. Holroyd, Princeton, a State Medical Association Delegate to the AMA.

Harold N. Kagan, Huntington; W. Alva Deardorff, Charleston; Walter E. Klingensmith, Beckley; and Ray M. Kessel, Logan.

The President

Born in Toler, Kentucky, as the youngest of 12 children, Doctor Leckie attended public schools in Huntington, where his family moved when he was 10 days old.

He received an undergraduate degree in chemistry from Marshall University in 1938, and was awarded his M. D. degree in 1950 from the George Washington University School of Medicine in Washington, D. C. After interning at the U. S. Marine Hospital in New Orleans, Doctor Leckie began family practice in Huntington in 1951.

During World War II, Doctor Leckie served as a commissioned line officer with the U. S. Navy Amphibious Force in the European Theater, and with the Navy's Bureau of Ships. He assisted in plans for postwar atomic tests at the Bikini Atoll in the Pacific.

Doctor Leckie is a Past President of the Cabell County Medical Society and the West Virginia Chapter of the American Academy of Family Physicians; a Fellow of the AAFP, and a member of the American College of Emergency Physicians (ACEP).

In the West Virginia State Medical Association, he has served as a member of the Council; as Vice President and President Elect; and on the Legislative, Program and Medical Education and Hospitals committees.

Doctor and Mrs. Leckie, the former Barbara Bartels, are the parents of a son, John Stephen Leckie, a 1971 graduate of the University of Kentucky who currently is employed in Lexington, Kentucky.

The President Elect

Doctor Mahood is a Past President of the Mercer County Medical Society (1963-64) and has been Secretary of the Society for 20 years. He has been Director of the Mercer County Health Department for 11 years.

John J. Mahood, M. D.
President Elect

A native of Bluefield, Doctor Mahood was graduated from the University of Virginia and was a high school teacher in Virginia for a brief period before entering the University of Virginia Medical School. He received his M. D. degree in 1947 from that institution. After interning at City Receiving Hospital in Detroit and working as a student physician at the University of Virginia, he was in practice as a family physician for one year in 1948-49 at Matoaka, West Virginia. He then served a residency in dermatology at Wayne State University School of Medicine in Detroit before entering private practice in dermatology in Bluefield in 1952.

Doctor Mahood is a member of the Board of the Mercer County Cancer Society, the Mercer County Board of Tuberculosis and Health, and the State Crippled Childrens Society. He is a consultant for the Veterans Administration Hospital at Beckley and the Federal Reformatory For Women at Alderson; and is on the consulting staffs of Bluefield Sanitarium, St. Luke's Hospital in Bluefield, and Princeton Community Hospital in Princeton.

Doctor Mahood was named to fill an unexpired term on Council in 1969 and later was elected to two terms on the Council beginning in 1971. He is a past Chairman of the Association's Medical Emergencies and Civil Defense Committee, of which he has been a member since 1965, and also is a member of the Nurses Liaison Committee.

Dr. Robert D. Hess To Head 1976 Program Committee

Dr. Robert D. Hess of Bridgeport has been named by the President, Dr. Jack Leckie, to serve as Chairman of the Program Committee for the West Virginia State Medical Association's 109th Annual Meeting at The Greenbrier, August 18-21, 1976.

Other committee members are Drs. Carl B. Hall of Charleston, John J. Mahood of Bluefield, Robert P. Pulliam of Beckley, Lyle D. Vincent of Parkersburg and Alvin L. Watne of Morgantown.

The Committee held its initial meeting at The Greenbrier on August 22.

The Vice President

Doctor Smith, a Dunbar family physician, served two terms on the Association's Council, beginning in 1968. He was President of the Kanawha Medical Society in 1967, and served on its Council in 1966-68. He is a Delegate of the West Virginia Chapter to the American Academy of Family Physicians.

A native of Sutton, Doctor Smith was graduated from West Virginia University and received his M. D. degree in 1950 from the Medical College of Virginia. He interned at Charleston General Hospital.

Doctor Smith has been nominated by Governor Moore for a second five-year term on the Medical Licensing Board of West Virginia.

First House Session

Dr. Max H. Parrott, President of the American Medical Association, was speaker for the first session of the House of Delegates on Wednesday afternoon. Doctor Parrott reviewed the activities and services of the AMA, declaring that, despite recent financial problems and some shortcomings in its program, it must be acknowledged that the AMA must continue to exist as a spokesman for physicians.

Doctor Gilmore presented Dr. John E. Jones, Dean of the West Virginia University School of Medicine, a check for $14,561.78 during the initial House session. This represented an annual contribution by West Virginia physicians and the Woman's Auxiliary members to the School of Medicine through the Education and Research Foundation of the AMA.

Opening Session

Congressman Harley O. Staggers of West Virginia addressed the physicians during opening exercises preceding the first general scientific session on Thursday. Mr. Staggers, Chairman of the Committee on Interstate and Foreign Commerce of the United States House of Representatives, admonished physicians to become more a part of the mainstream of American life and asked them to cooperate with the government in seeing that there are sufficient numbers of doctors in the United States, especially in rural areas.

Amendments and Resolutions

The House of Delegates adopted an amendment to the Association's Bylaws clarifying who can call a Committee meeting; and received for consideration in 1976 proposed amendments to the Constitution and Bylaws designed to clarify the status of the Association's Junior Councilor, and to provide a new membership classification for retired physicians.

New officers of the West Virginia State Medical Association were elected during the 108th Annual Meeting, August 20-23, at The Greenbrier in White Sulphur Springs. Seated, from left, are Drs. Jack Leckie, Huntington, President; John J. Mahood, Bluefield, President Elect; Joseph A. Smith, Dunbar, Vice President; George R. Callender, Jr., Charleston, re-elected as an Alternate Delegate to the AMA; Kenneth G. MacDonald, Charleston, re-elected Treasurer; and William E. Gilmore, Parkersburg, immediate Past President and Chairman of the Council; standing, from left, Drs. J. L. Mangus, Charleston, and David F. Bell, Jr., Bluefield, re-elected to two-year terms on the Council; L. Walter Fix, Martinsburg, appointed by the Council in 1974 and elected this year to the second year of the current Fourth District term; Robert R. Weiler, Wheeling, re-elected Councilor; Walter E. Klingensmith, Beckley, holdover Councilor; Frank J. Holroyd, Princeton, re-elected as an AMA Delegate; and Robert D. Hess, Bridgeport, re-elected Councilor. Not shown are Drs. Robert W. Bess, Jr., Piedmont, and Louis W. Groves, Jr., Richwood, re-elected Councilors.

Drs. William E. Gilmore, Parkersburg, and Jack Leckie, Huntington (from left) are shown with Representative Harley O. Staggers of West Virginia, who was an honor guest and addressed physicians during opening exercises at the 108th Annual Meeting of the State Medical Association; on the right, Congressman Staggers is greeted immediately following his address by Dr. Isaiah A. Wiles, Morgantown.

The House also acted upon a total of 10 resolutions (please see the complete texts of all resolutions as finally adopted and other action taken on page xix) covering subjects ranging from ethics of medical advisors to governmental agencies to support for medical schools and infringement by outside parties on responsibilities of physicians and hospitals for patient care.

The House adopted by a unanimous voice vote a resolution that the State Medical Association "support any medical school in existence or under development if adequate funding of such institution is feasible;" and strongly urged executive and legislative branches of State government "to give serious consideration to the feasibility of a single, umbrella type of administrative structure for such medical education programs."

In its first session on August 20, the House accepted an Executive Committee recommendation that no further consideration be given, at this time, to a resolution introduced in 1974 by the Raleigh County Medical Society calling for statewide unified membership in the American Medical Association.

Specifically, the resolution—referred by the House in 1974 to the Executive Committee for study and a report back to the House this year—called for amendment of the State Medical Association Constitution and Bylaws to require all Association members also to be members of the AMA.

"Symposium On New Concepts in Cancer Diagnosis and Therapy" was the title of the first general scientific session during the 108th Annual Meeting of the State Medical Association. Moderated by Dr. Raymond B. Weiss, Morgantown, left, the speakers were Dr. Vincent T. DeVita, Jr., Bethesda, Maryland; Ariel C. Hollinshead, Ph. D., Washington, D. C.; Dr. Arvin S. Glicksman, Providence, Rhode Island; and Dr. Paul B. Chretien, Bethesda (from left); In the right photo, Dr. Robert P. Pulliam, Beckley (left), was moderator for the second scientific session. The speakers were, from left, Drs. Charles A. White, Morgantown; Russell V. Lucas, Jr., Minneapolis, Minnesota; and Paul B. Chretien, Bethesda, Maryland (not shown).

Pre-Convention Council Meeting At The Greenbrier

The West Virginia State Medical Association's Council covered a wide range of subjects during a long pre-convention meeting at The Greenbrier in White Sulphur Springs on August 20. Dr. A. Thomas McCoy of Charleston, the Council's Chairman, presided.

In summary, the Council:

—Voted unanimously to accept The Greenbrier's invitation to hold the 1976 annual meeting there next August 18-21.

—Heard brief reports from State Workmen's Compensation Commissioner B. Frederick Becker, Welfare Commissioner Thomas R. Tinder and Insurance Commissioner Donald W. Brown covering programs and activities in their agencies related to work with physicians and other aspects of health care.

—Approved a financial report submitted by Dr. Kenneth G. MacDonald of Charleston, the Association's Treasurer, listing receipts and expenditures for January through June, 1975.

—Reviewed proposed amendments to the Association's Constitution and Bylaws, designed to provide a new membership classification for retired physicians and to clarify who can call a committee meeting, with Dr. Harry S. Weeks, Jr., of Wheeling, Chairman of the Constitution and Bylaws Committee, explaining the amendments.

—Reviewed 11 resolutions from component societies and affiliated sections prepared for introduction at the first House of Delegates session later on August 20; and voted to submit two additional resolutions—No. 12 related to the practice of podiatry and No. 13 dealing with infringement on hospital medical practice—as originating in Council.

—Approved active member-dues exempt status for 1976 for Dr. Charles W. Nelson, Jr., of Beckley in Raleigh County, who entered a residency program in psychiatry at Duke University on July 1.

—Approved interim Executive Committee action endorsing an application by Region II Health Planning Association, Inc., to the National Health Service Corps for assignment of physicians to the Milton-Culloden-Ona area of Cabell County (The Cabell County Medical Society had taken earlier action to certify this need).

—Recognized retiring Councilor Charles E. Andrews, M. D., of Morgantown for his four years of dedicated service.

—Received a report from Mr. Charles R. Lewis, the Association's Executive Secretary, which noted that (1) the Association membership stood at an apparent record 1,659 as of August 1, with 1,492 dues-paying members; (2) financial contributions from various companies toward support of the 1975 annual meeting's scientific program amounted to $3,850; (3) state office renovations to accommodate a new staff member, Mrs. Marilyn Reno, had been completed; and (4) Dr. James H. Sammons, Executive Vice President of the American Medical Association, had accepted an invitation to address a meeting of physicians on Friday evening, January 30, during the annual Mid-Winter Clinical Conference in Charleston.

—Received a detailed report from Dr. Carl J. Roncaglione of Charleston, Chairman of the Association's Medical Economics Committee, and—on motion by Dr. Worthy W. McKinney, seconded by Dr. George R. Callender, Jr.—complimented Doctor

In the left photo, speakers for the "Mini-Diabetic Seminar" during the third general scientific session of the 108th Annual Meeting of the State Medical Association were, from left, Drs. Stanley R. Shane, Morgantown; Thomas G. Skillman, Columbus, Ohio; and James M. Moss, Washington, D. C. Dr. John W. Traubert, right, Morgantown, moderated the scientific session and also spoke on "Family Practice in West Virginia—1975"; in the right photo, President Leckie is shown with his family, Mrs. Leckie (Barbara) and their son, John, of Lexington, Kentucky.

Shown in the left photo during the 108th Annual Meeting of the State Medical Association are, from left, Drs. Worthy W. McKinney, Beckley; Gilbert M. Wilhelmus, President of the Indiana State Medical Association; and Maurice E. Lieber, President of the Ohio State Medical Association; in the right photo are some of those who were in the receiving line for the President's Reception for honor guests—Dr. and Mrs. William E. Gilmore, Parkersburg, left; and Dr. and Mrs. Max H. Parrott, Portland, Oregon. Doctor Gilmore is the immediate Past President of the State Medical Association, and Doctor Parrott, President of the AMA.

Roncaglione for the thorough job the report reflected.

—Received a progress report on West Virginia Medical Institute, Inc. activities from Doctor Weeks, the Institute President, including preliminary plans to delegate review activities to 15 to 20 hospitals over the next few months in line with the Institute's designation as the conditional Professional Standards Review Organization (PSRO) for West Virginia.

—Received from Dr. N. H. Dyer, West Virginia Health Director and Medical Licensing Board Secretary, preliminary results of a new survey relative to numbers of licensed physicians in West Virginia, with the report showing that 870, or 47.7 per cent, of the 1,822 permanently licensed physicians practicing in the State who had responded by August 13 to the survey questionnaire were involved principally in primary care.

—Heard a brief report from Doctor Andrews regarding litigation pending in the U. S. District Court for Southern West Virginia, and centered about recent court orders directing the West Virginia University Hospital to provide for and permit abortions there.

In his remarks to the Council, Commissioner Becker noted a "fine rapport" with the medical community, but sought to encourage more medical

In the left photo, Dr. William E. Gilmore, Parkersburg, right (as President), presents Dr. John E. Jones, Dean of the West Virginia University School of Medicine, a check for $14,561.78 during the initial House session at the 108th Annual Meeting of the State Medical Association. The check represented an annual contribution by West Virginia physicians and the Woman's Auxiliary members to the School of Medicine through the Education and Research Foundation of the AMA; shown on the right are members of the Association's Publication Committee: Drs. Vernon E. Duckwall, Elkins, Associate Editor of The West Virginia State Medical Journal; George F. Evans, Editor; and Thomas J. Holbrook, Huntington; John M. Hartman, Charleston; and Stephen D. Ward, Wheeling, Associate Editors (from left). Not shown are Drs. Joe N. Jarrett, Oak Hill; and Edward J. Van Liere, Morgantown, Associate Editors.

examiners to "do business" with the Workmen's Compensation Fund.

Commissioner Brown expressed concern over current restricted availability of professional liability insurance coverage for physicians, with only one company (Aetna Life and Casualty) now writing such insurance in the State; and asked the Medical Association's cooperation toward two objectives: a short-range assurance of available coverage at affordable costs, and a long-range goal of reduced insurance costs without undue interference with the rights of others.

Commissioner Tinder said the Department of Welfare's basic philosophy is to provide "help to people in time of need," with guiding principles toward that end based on quality in medical, social and other programs.

In receiving Doctor Roncaglione's report, the Council—on motion by Doctor Andrews and seconded by Doctor McKinney—referred to the Executive Committee for action a recommendation that a task force be established for a review of all aspects of West Virginia's program in vocational rehabilitation.

On motion by Dr. Jack Leckie, seconded by Doctor Callender, the Council endorsed a Medical Economics Committee recommendation that a set of guidelines toward standardization of disability measurement be developed by the Committee's Workmen's Compensation Subcommittee for presentation to the State's Workmen's Compensation Commissioner.

The Council concluded its meeting by formally recognizing, on motion by Doctor McKinney, Doctor McCoy's efforts as Chairman over the past year, and according Doctor McCoy an ovation for his service.

The meeting was attended by Dr. A. Thomas McCoy of Charleston, Chairman; Dr. William E. Gilmore, Parkersburg, President; Dr. Jack Leckie, Huntington, President Elect; Dr. John J. Mahood, Bluefield, Vice President; Dr. Kenneth G. MacDonald, Charleston, Treasurer; Dr. Worthy W. McKinney, Beckley, Councilor at Large; Dr. Harry S. Weeks, Jr., Wheeling, Junior Councilor; Drs. Robert R. Weiler, Wheeling; Charles E. Andrews, Morgantown; Ray M. Kessel, Logan; L. Walter Fix, Martinsburg; L. H. Nefflen, Elkins; Robert D. Hess, Bridgeport; Louis W. Groves, Jr., Richwood; Lyle D. Vincent, Parkersburg; W. Alva Deardorff and J. L. Mangus, both of Charleston; Walter E. Klingensmith, Beckley; and David F. Bell, Jr., Bluefield; Mr. Charles R. Lewis, Charleston, Executive Secretary; Mr. Custer B. Holliday, Charleston, Executive Assistant; and Mrs. Mary W. Hamilton, Charleston, Administrative Assistant.

Also attending the meeting were Drs. Frank J. Holroyd of Princeton and Richard E. Flood of Weirton, AMA Delegates; Dr. George R. Callender, Jr., Charleston, AMA Alternate Delegate; Dr. N. H. Dyer, Director of the State Health Department; Dr. Winfield C. John, Huntington; and Drs. Carl J. Roncaglione, John B. Markey and George A. Shawkey, all of Charleston.

Two Additional Speakers Named For Mid-Winter Conference

Drs. Herman K. Goldberg of Baltimore and Peyton E. Weary of Charlottesville, Virginia, will be speakers during the Ninth Mid-Winter Clinical Conference in Charleston next January 30-February 1, it was announced by the Program Committee.

The continuing education program will be held at the Daniel Boone Hotel, beginning at 2 P. M. on Friday, January 30, and continuing through noon on Sunday, February 1. The conference is sponsored

Among those attending the President's Reception for honor guests during the State Medical Association's 108th Annual Meeting were, from left, Dr. and Mrs. George S. Kosar, Dr. George Naymick, Dr. Richard E. Flood, and Mrs. Naymick, all of Weirton; also attending the reception, on the right, were Drs. Worthy W. McKinney, Beckley; Karl S. Mech, President of the Medical & Chirurgical Faculty of Maryland; and A. Reynolds Crane, President of the Pennsylvania Medical Society (from left).

Herman K. Goldberg, M. D.

Peyton E. Weary, M. D.

by the State Medical Association in conjunction with other medical groups and volunteer health agencies.

Doctor Goldberg, who is in the practice of ophthalmology in Baltimore, will discuss dyslexia and the hyperactive child at a public session Friday evening at 8 o'clock, and will address the same topic at a medically-oriented session for physicians Saturday morning, January 31.

Doctor Goldberg is Chief of Ophthalmology at Sinai Hospital in Baltimore and Associate Professor of Pediatrics and Ophthalmology at Johns Hopkins University School of Medicine in that city.

Prior to Doctor Goldberg's presentation at the public session Friday evening, opening remarks will be made by Mrs. Frances Fuller, Supervisor of Consultants in Learning Disabilities for Kanawha County Schools; and Mrs. Hope Stewart, R. N., Coordinator of Health Services for Kanawha County Schools. Mrs. Fuller will mention the dyslexia learning disability problems she encounters, and Mrs. Stewart will make observations about the role of school nurses in working with this disability.

Peyton E. Weary, M. D.

Doctor Weary, Professor of Dermatology at the University of Virginia School of Medicine, is scheduled to speak on "Office Dermatology" at the Saturday afternoon session. Certified by the American Board of Dermatology, he is Chairman of the Council, National Program for Dermatology, and is past Secretary-Treasurer of the Virginia Dermatological Society, Inc. He also is Chairman of the Senior Electives Program at the University of Virginia School of Medicine, and is a member of the Board of Directors, Virginia Division, American Cancer Society.

A native of Evanston, Illinois, Doctor Weary was graduated from Princeton University and received his M. D. degree in 1955 from the University of Virginia School of Medicine. He served a rotating internship at the University Hospital of Cleveland, and residencies in dermatology at the University of Virginia. He is a member of the Society for Investigative Dermatology, the American Dermatological Association and the American Academy of Dermatology.

Dr. James H. Sammons To Speak

It was announced previously that Dr. James H. Sammons, Executive Vice President of the American Medical Association, will be a special guest speaker during the conference. Doctor Sammons will address contemporary issues confronting medical societies and the medical community at a physicians' session to be held Friday evening concurrently with the public session.

Other Scientific Topics

Scientific sessions will be held Friday afternoon, Saturday morning and afternoon, and Sunday morning. A symposium on "The Acute Abdomen" will be held during the Friday afternoon session. Also scheduled are scientific papers on diabetes and "Office Otolaryngology" (in addition to "Office Dermatology") on Saturday afternoon; and "Office Gynecology," "Office Urology" and "Non-Operative Orthopedics," Sunday morning.

Serving on the Program Committee are Drs. Joseph T. Skaggs and Ralph H. Nestmann of Charleston, Co-Chairmen, and Drs. William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

Attendance at the conference will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the conference also is expected to carry prescribed credit by the American Academy of Family Physicians.

A registration fee of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents.

Physicians, wives and guests will be invited to attend the annual dinner dance of the Kanawha Medical Society Saturday evening, January 31, at the Daniel Boone.

Further details, including additional conference speakers, will be provided in later issues of *The Journal* as the program is completed.

State Dept. Of Welfare Issues Policy On Sterilization

The Division of Medical Care of the West Virginia Department of Welfare recently sent to all State physicians a policy statement containing Federal and State regulations concerning sterilization, including payment for non-therapeutic sterilization under the Medicaid Program. A Sterilization Informed Consent Form (Form M-89) was attached to the mailing, which was labeled "Medicaid Program Instruction, MA-74-13, August 26, 1975."

For additional information, physicians may contact the West Virginia Department of Welfare, Division of Medical Care, 1900 Washington Street, East, Charleston, 25305.

Mrs. Robert R. Weiler Installed As Auxiliary President

Mrs. Robert R. Weiler of Wheeling assumed the Presidency of the Woman's Auxiliary to the West Virginia State Medical Association at the group's 51st Annual Meeting at The Greenbrier in White Sulphur Springs, August 20-23. Mrs. Weiler, who was installed by Mrs. William J. Reardon of McLean, Virginia, Eastern Regional AMA-ERF Chairman, announced that the Auxiliary this year will start an educational program for physicians' wives in State and national legislation.

Mrs. Erle E. Wilkinson of Nashville, Tennessee, President of the Woman's Auxiliary to the American Medical Association, an invited honor guest to the State Auxiliary meeting, was unable to attend because of the illness of her husband. Mrs. Reardon served as Mrs. Wilkinson's official representative. Also attending the meeting as an honor guest was Mrs. James H. Manning of Marietta, Georgia, President of the Woman's Auxiliary to the Southern Medical Association.

The wife of an orthopedic surgeon and mother of four children, Mrs. Weiler succeeded Mrs. William T. Lawson of Fairmont. The Auxiliary elected Mrs. J. L. Mangus of Charleston as President Elect, and the following additional officers:

Mrs. Charles E. Andrews of Morgantown, Vice President; Mrs. D. Sheffer Clark, Huntington, Recording Secretary; Mrs. Robert J. Reed III, Triadelphia, Corresponding Secretary; Mrs. Louis W. Groves, Jr., Richwood, Treasurer; and Mrs. M. Bruce Martin, Huntington, Parliamentarian;

Mrs. Harry S. Weeks, Jr., Wheeling, Northern Regional Director; Mrs. Donald E. Hassig, Charleston, Central Regional Director; Mrs. Gary G. Gilbert, Huntington, Western Regional Director; Mrs. T. Keith Edwards, Bluefield, Southern Regional Director; and Mrs. David Z. Morgan, Morgantown, Eastern Regional Director.

Committee Appointments

Mrs. Weiler also announced these appointments of Committee Chairmen:

Mrs. J. L. Mangus, Charleston, Bank Project; Mrs. Paul Francke, Jr., Charleston, AMA Education and Research Foundation; Mrs. P. A. Tuckwiller, Charleston, Archives & History; Mrs. William T. Lawson, Fairmont, Bylaws and Handbook; Mrs. Howard Weiler, Wheeling, Convention Chairman; Mrs. Robert T. Bandi, Triadelphia, Convention Co-Chairman; Mrs. Robert G. Janes, Fairmont, Cook

New officers of the Woman's Auxiliary to the West Virginia State Medical Association, elected during the group's 51st Annual Meeting at The Greenbrier in White Sulphur Springs, August 20-23, are, seated (from left) Mrs. D. Sheffer Clark, Huntington, Recording Secretary; Mrs. J. L. Mangus, Charleston, President Elect; Mrs. Robert R. Weiler, Wheeling, President; and Mrs. Charles E. Andrews, Morgantown, Vice President; (standing, from left) Mrs. Louis W. Groves, Richwood, Treasurer; Mrs. T. Keith Edwards, Bluefield, Southern Regional Director; Mrs. Donald E. Hassig, Charleston, Central Regional Director; Mrs. Gary G. Gilbert, Huntington, Western Regional Director; Mrs. Harry S. Weeks, Jr., Wheeling, Northern Regional Director; Mrs. Robert J. Reed III, Triadelphia, Corresponding Secretary; and Mrs. M. Bruce Martin, Huntington, Parliamentarian. Not shown is Mrs. David Z. Morgan, Morgantown, Eastern Regional Director.

Mrs. Robert R. Weiler

Book; Mrs. Robert O. Strauch, Wheeling, Editor, State News Bulletin; Mrs. Francis J. Gaydosh, Wheeling, Circulation Manager, News Bulletin; Mrs. J. Dennis Kugel, Charleston, Finance;

Mrs. J. E. Blaydes, Jr., Bluefield; Mrs. Joseph T. Mallamo, Fairmont; and Mrs. Charles E. Harrison, Clarksburg, Health Careers Fund; Mrs. Richard G. Starr, Beckley, Communications; Mrs. E. M. Spencer, Bluefield, Health Committees; Mrs. John A. B. Holt, Charleston, Legislation; and Mrs. Harry E. Coffman, Keyser, Necrology.

Mrs. Weiler, the daughter of Mr. and Mrs. Harry Zimmers of Wheeling, was born and educated in Wheeling and attended West Liberty State College and West Virginia University. Through the years she has been involved in fraternal, religious and community service groups.

The new President has been active in county and State Auxiliary work for the past 10 years. She was President of the Ohio County Auxiliary in 1970. In the State Auxiliary, she has served as Editor of the State News Bulletin, as a regional director, and for two years as Chairman of the AMA Education and Research Foundation.

Ohio County Society Schedules Trauma Seminar, Oct. 30

A seminar on "Trauma and Care of the Critically Injured" will be held by the Ohio County Medical Society on October 30 at Wilson Lodge in Oglebay Park at Wheeling. The seminar will be held from 1:30 to 9 P. M.

The speakers and their topics will be "Mid-Facial Fractures"—Philip M. Sprinkle, M. D., Professor and Chairman, Division of Otolaryngology, West Virginia University Medical Center; "Acute Management of Thoracolumbar Spine Fractures and Dislocations"—Robert N. Clark, M. D., Professor and Chairman, Division of Orthopedic Surgery, WVU; "Cranio-Cerebral Trauma"—Peter J. Jannetta, M. D., Professor and Chairman, Division of Neurology, University of Pittsburgh Medical Center.

"Priorities in Resuscitation of the Critically Injured"—Felicien M. Steichen, M. D., Professor of Surgery and Associate Surgeon-In-Chief, University of Pittsburgh Medical Center; "Initial Evaluation and Management of the Injured Child"—Thomas S. Morse, M. D., Associate Professor of Surgery, Department of Pediatric Surgery, Children's Hospital, Columbus, Ohio;

"Thoraco-Abdominal Injuries — Evaluation and Treatment"—Emil Naclerio, M. D., Harlem Medical Center, New York City; "Vascular Injuries in Blunt and Penetrating Trauma"—Charles Copeland, M. D., Assistant Professor of Surgery, University of Pittsburgh Medical Center;

"Physiology and Emergency Treatment of Chest Trauma"—Doctor Naclerio; and "Diagnosis and Management of Blunt and Penetrating Wounds of the Abdomen"—Doctor Steichen.

The latter two presentations will begin at 7:30 P. M. following a social hour and dinner to begin at 5:30 P. M. The program will conclude with a panel discussion beginning at 8:30 P. M.

For additional information, contact Dr. Alfred D. Ghaphery, President of the Ohio County Medical Society, at 601 National Road, Wheeling 26003 (phone (304) 232-3520).

Gov. Moore Makes Nominations For State Medical Boards

A number of physicians and others were nominated to State boards and commissions by Governor Arch A. Moore, Jr. when a special session of the State Legislature convened July 29. The State Senate will consider confirmation of those nominated when it returns from a long recess on November 1.

Nominated for reappointment to the Medical Licensing Board of West Virginia, for five-year terms, were Drs. Joseph A. Smith of Dunbar, Harry S. Weeks, Jr., of Wheeling, and Richard E. Flood of Weirton. Doctor Flood also was nominated for reappointment to another five-year term on the West Virginia Board of Examiners of Licensed Practical Nurses.

Carl B. Williams of Morgantown was nominated for appointment to the Commission on Postmortem Examinations. Also nominated were Dr. James T. Spencer of Charleston, to the Board of Hearing Aid Dealers; and Eugene L. Staples, Director of the West Virginia University Hospital, to the Advisory Board of the State Board of Health.

Dr. John A. Thomas Promoted To Associate Dean, WVU

Dr. John A. Thomas has been promoted to Associate Dean of the West Virginia University School of Medicine. The promotion, announced by WVU President James G. Harlow, was effective July 1.

Doctor Thomas will continue to plan and coordinate certain phases of the School of Medicine's activities and assume some additional administrative tasks. As Professor, he will remain active in teaching and research in the Department of Pharmacology.

Doctor Thomas is the author of several books and chapters in the field of endocrinology, and has published 200 scientific articles in the areas of hormone and drug research. He co-edits the annual series, *Advances in Sex Hormone Research*, and was appointed recently to the editorial board of *Toxicology and Applied Pharmacology*.

Bylaws Changed, Constitutional Amendments Introduced

A Bylaws change clarifying who can call a committee meeting was adopted by the West Virginia State Medical Association's House of Delegates during the August 20-23 Annual Meeting of the Association in White Sulphur Springs.

Two proposed changes in the Association's Constitution—one to establish a new membership category for retired physicians, and another to correct an inconsistency between the Constitution and Bylaws with regard to the Junior Councilor—were introduced and will be up for consideration by the House next year.

Also awaiting action next year is an additional Bylaws change to implement the proposed change in the Constitution to provide the retired member category.

Here is the actual wording of the approved Bylaws change:

Amend Chapter VIII by adding a new Section 8 to read as follows:

Sec. 8. The Chairman of a standing or special committee may call a meeting at any time the Chairman desires; or a meeting can be called upon request of a majority of a committee's members, or upon the recommendation of the President of the Association.

Here are the proposed amendments as actually introduced:

PROPOSED AMENDMENT TO THE CONSTITUTION

(To Be Acted Upon Finally
At the First Session of the House of Delegates
During the 1976 Annual Meeting)

Amend Article VI, Section 1, to read as follows:

Sec. 1. The Council shall consist of the elected Councilors from each district; the immediate Past President, who shall serve as Chairman; *his two immediate predecessors, who shall be the Senior and Junior Councilors-at-Large for one year;* and the President, the President Elect, the Vice President and the Treasurer. A majority of the members of the Council shall constitute a quorum. Their duties and responsibilities shall be defined in the By-Laws.

(Adoption of this amendment, with proposed new language underlined (italics here), would correct a current inconsistency between Constitution and Bylaws with regard to the Junior Councilor).

PROPOSED AMENDMENT TO THE CONSTITUTION

(To Be Acted Upon Finally
At the First Session of the House of Delegates
During the 1976 Annual Meeting)

Amend Article IV, Section 1, to read as follows:

Sec. 1. This Association shall consist of active, *retired* and honorary members.

Amend Article IV, Section 4, to read as follows:

Sec. 4. *Retired* and honorary members shall be those physicians qualified for such membership under the By-Laws of this Association.

Adoption of this two-part amendment would provide a new category of *retired* members in the State Medical Association).

PROPOSED AMENDMENT TO THE BYLAWS

Amend Chapter I, Section 6, by deleting the last two paragraphs and substituting the following:

The honorary membership of this Association shall consist of those physicians who have attained outstanding eminence in the medical profession; have been nominated for honorary membership by their component societies; and have been elected to such membership by a majority vote of the Council and the House of Delegates of the Association.

The retired membership of this Association shall consist of those physicians who have been active members of a state medical association for twenty-five (25) or more consecutive years; and who have retired from professional activity. Nominations for this category shall be forwarded by the appropriate component societies to the executive secretary for submission to Council for election.

Honorary and retired members shall be exempt from the payment of dues or assessments. They shall have the privilege of the floor in any open session of the Association, but shall not have the right to make or second motions, to vote, or to hold any elective office in this Association, except that they may hold elective or appointive committee membership.

Ophthalmology Association Installs Dr. Albert C. Esposito

Dr. Albert C. Esposito of Huntington was installed as President of the American Association of Ophthalmology at its annual meeting in Dallas, September 19-24. Doctor Esposito, who was elected President Elect last year, succeeds another West Virginia physician, Dr. Ralph W. Ryan of Morgantown, as President.

Doctor Esposito, who has practiced in Huntington since 1946, is a Past President of the West Virginia State Medical Association and the Southern Medical Association. A native of Pittsburgh, he was graduated from the University of Pittsburgh and received his M. D. degree (cum laude) in 1938 from the Stritch School of Medicine of Loyola University in Chicago. He is certified by the American Board of Ophthalmology, and is a Fellow of the American Academy of Ophthalmology and Otolaryngology. He has served as President of the Cabell County Medical Society and the West Virginia Academy of Ophthalmology and Otolaryngology.

Albert C. Esposito, M. D.

Doctor Esposito was selected by the Board of Trustees of Loyola University as the recipient of the 1974 "Stritch Medal" award, which is named after the late Cardinal Stritch of Chicago. The award is given each year to an outstanding American who has distinguished himself in a special field of endeavor.

Doctor Esposito is a member of the West Virginia House of Delegates from Cabell County.

Affiliated Societies, Sections Elect New Officers

Some of the scientific sections, associations and societies affiliated with the West Virginia State Medical Association elected new officers at sessions during the Association's 108th Annual Meeting at The Greenbrier. The groups and new officers reported included:

Section on Surgery—Dr. Walter G. Klingensmith, Beckley, Chairman.

Section on Orthopedic Surgery—Drs. Tony C. Majesto, Charleston, President; Jack Pushkin, Charleston, Vice President; and Arthur A. Abplanalp, Charleston, re-elected Secretary-Treasurer.

Section on Neurology, Neurosurgery and Psychiatry—Drs. Arthur L. Poffenbarger, Charleston, re-elected President; and Hartwell G. Thompson, Charleston, re-elected Secretary.

West Virginia Radiological Society—Drs. James T. Smith, Charleston, President; Orlando F. Gabriele, Morgantown, Vice President; and Andrew W. Goodwin, II, Charleston, Secretary-Treasurer (all re-elected).

West Virginia District Branch, American Psychiatric Association—Drs. Florence K. Hoback, Huntington, President; Donald C. Carter, Morgantown, President Elect; Larry C. Smith, Huntington, Secretary; and Roy A. Edwards, Jr., Huntington, Treasurer.

West Virginia Section, American College of Nuclear Medicine—Dr. Steven A. Artz, Charleston, Chairman; and Dr. B. B. Richmond, Beckley, Vice Chairman.

Section on Internal Medicine—Dr. Harold Selinger, Charleston, Chairman.

Section on Urology—Dr. A. Thomas McCoy, Charleston, President; and Dr. James W. Lane, Charleston, Secretary-Treasurer.

Serving another year of two-year terms will be officers of the West Virginia Chapter, American Society of Internal Medicine. They are Drs. John F. Otto, Jr., President; and William J. Echols, Secretary-Treasurer, both of Huntington. Officers also were elected prior to the Annual Meeting for the West Virginia Association of Pathologists. They are Dr. Vicente Anido, Morgantown, President; Dr. John P. Sheils, Huntington, Vice President; and Dr. Karl L. Klapproth, Charleston, Secretary-Treasurer.

Allied Health Leaders To Speak In 'Third Century Symposia'

Allied health leaders will be one of eight groups of state leaders in various fields participating in the "Third Century Symposia," being held on designated Thursdays from 7 to 10 P. M. by Parkersburg Community College.

Included among guest speakers for the allied health group will be Eugene L. Staples, Director of West Virginia University Hospital, Morgantown, whose topic will be "Hospital Uses and Hospital Costs in America's Third Century" (October 30); Dr. Louise B. Gerrard, Executive Director, West Virginia Commission on Aging, "Care of the Aged in America's Third Century" (November 6); and Don L. Arnwine, President, Charleston Area Medical Center, and Dr. David T. Puderbaugh, Associate Professor, WVU School of Dentistry, speakers for "Legal and Moral Issues in the Health Field in America's Third Century" (November 13).

The other "Third Century Symposia" will be State, County and City Governmental Leaders, Non-Profit and Human Service Agency Heads, Educational Leaders, Business Leaders, Labor Leaders, Religious Leaders, and Community Leaders.

For registration fees and other information contact Dr. Bernard L. Allen, Parkersburg Community College, Rt. 5, Box 167-A, Parkersburg 26101 (telephone (304) 485-7961).

Continuing Education Activities

Listed below are the continuing medical education activities of the West Virginia University School of Medicine and other organizations, for 1975 and part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education at WVU. The schedule is presented as a convenience for physicians in planning their continuing education program.

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1975)

Date	*Course Title*	*Place*
Oct. 2, 3	Hal Wanger Family Practice Conference	Morgantown
Oct. 10, 11	Fall Meeting of the Allegheny Branch of the Society of Microbiology	Morgantown
Oct. 23, 24	Postgraduate Pharmacy Seminar on Hypertension	Morgantown
Oct. 31-Nov. 1	Regional Meeting of Western Pennsylvania and West Virginia American College of Physicians	Morgantown
Oct. 31-Nov. 1	Seminar in Clinical Microbiology	Morgantown
Nov. 7, 8	Surgery of the Major Blood Vessels—Department of Surgery and West Virginia Chapter of American College of Surgeons	Morgantown
Nov. 14, 15	Management of Blood and the Hospital Laboratory	Charleston
Dec. 5	Cardiology Teaching Day	Morgantown
Dec. 5, 6	Percutaneous Techniques in Neurosurgery	Morgantown
Dec. 19	Dermatology for the Primary Physician	Morgantown

(1976)

Jan. 30, 31, Feb. 1	Mid-Winter Clinical Conference	Charleston
Feb. 25, 26	High Risk Pregnancy Management	Charleston
Feb. 26, 27, 28	Family Practice Review Course	Morgantown
Mar. 13	Internal Medicine Teaching Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston

Clinical Microbiology Seminar To Be Conducted At WVU

A "Seminar in Clinical Microbiology" will be held October 31 and November 1 at the West Virginia University Medical Center in Morgantown. The seminar is being sponsored by the WVU School of Medicine and the American Society of Clinical Pathologists.

The Friday, October 31, program will begin with registration at 8 A. M., followed by welcoming remarks from Dr. N. LeRoy Lapp at 9:30 A. M. Friday's speakers and their topics will include:

"Identification of Yeasts"—Robert S. Pore, Ph. D.; "Use and Abuse of Blood Culture in the Practice of Medicine"—Michael Stargel, M. D.; "Good, Bad and Ugly"—Robert Veltri, Ph. D.; and "Mechanisms of Bacterial Pathogenesis"—Irvin Snyder, Ph. D. There will also be a color video tape, produced by the American Society of Clinical Pathologists, on "Anaerobic Procedures in the Clinical Laboratory."

Speakers and their topics for the Saturday morning—and final—session will be "Gram Stains of Clinical Specimens"—Mr. Dane Moore, MT (ASCP); "Five Years of Experience with the Kirby-Bauer Sensitivity Procedures"—Victor A. Fazekas, M. D.; and "Kirby-Bauer Procedure and its Relation to Defects in the Bacterial Membrane"—Patricia Charache, M. D. Closing remarks will be made by Vicente Anido, M. D., Professor and Chairman, Division of Clinical Pathology, WVU.

The continuing medical education program meets the criteria for eight hours of credit in Category 1 for the Physician's Recognition Award of the American Medical Association.

The registration fee for pathologists will be $25; for non-West Virginia University Hospital technologists, $10. For additional information, contact Dr. Vicente Anido, Room 2288, West Virginia University Hospital, Morgantown 26506.

Standing and Special Committees Appointed By Doctor Leckie

Here is a partial list of the standing, special and ad hoc committees which have been named by Dr. Jack Leckie of Huntington, President of the West Virginia State Medical Association, to function during his one-year term of office. The remaining committees will be published in the November issue of *The Journal.*

Aging

Eldon B. Tucker, Morgantown, Chairman; Myer Bogarad, Weirton; Richard Hamilton, St. Marys; and Pat A. Tuckwiller, Charleston.

Cancer

James P. Carey, Huntington, Chairman; John J. Battaglino, Jr., Wheeling; Walter B. Bice, Jr., North Parkersburg; F. Lloyd Blair, Parkersburg; William B. Blake, Jr., Huntington; Harry F. Cooper, Beckley; L. Walter Fix, Martinsburg; S. William Goff, Parkersburg; David B. Gray, Charleston; Arthur E. Levy, Williamson; Catalino B. Mendoza, Jr., Clarksburg; Hu C. Myers, Philippi; Jess S. Renedo, Wheeling; Richard G. Starr, Beckley; Charles W. Thacker, Parkersburg; John W. Trenton, Kingood; and Alvin L. Watne, Morgantown.

Constitution and Bylaws

Harry S. Weeks, Jr., Wheeling, Chairman; George R. Callender, Jr., Charleston; Richard E. Flood, Weirton; Carl B. Hall, Charleston; J. C. Huffman, Buckhannon; Winfield C. John, Huntington; Joseph B. Reed, Buckhannon; L. J. Pace, Princeton; and J. Hugh Wiley, Morgantown.

Insurance

Lyle D. Vincent, Parkersburg, Chairman; John T. Chambers, Charleston; R. U. Drinkard, Wheeling; L. Walter Fix, Martinsburg; F. Perry Greene, Jr., Parkersburg; H. Summers Harrison, Morgantown; James A. Heckman, Huntington; Upshur Higginbotham, Bluefield; C. A. Hoffman, Huntington; Kenneth G. MacDonald, Charleston; Buford W. McNeer, Hinton; and C. Vincent Townsend, Martinsburg.

Sub-Committee on Investments & Trust

C. A. Hoffman, Chairman; Buford W. McNeer (1976); Kenneth G. MacDonald (1977); Upshur Higginbotham (1978); and John T. Chambers (1979).

Ad Hoc Committee on Professional Liability

William E. Gilmore, Parkersburg, Chairman; John T. Chambers, Charleston; C. A. Hoffman, Huntington; Frank J. Holroyd, Princeton; Kenneth G. MacDonald, Charleston; and Worthy W. McKinney, Beckley.

Interprofessional Relations

George R. Callender, Jr., Charleston, Chairman.

Sub-Committees

Medico-Legal: Charles W. Merritt, Beckley, Chairman; John C. Bryce, Parkersburg; John F. Otto, Jr., Huntington; and Paul H. Revercomb, Charleston.

Medicine and Religion: Joe N. Jarrett, Oak Hill, Chairman; Thomas J. Conaty, Huntington; and William E. Gilmore, Parkersburg.

Medicine and Pharmacy: L. Dale Simmons, Clarksburg, Chairman; R. C. Cowan, Jr., Parkersburg; and John L. Fullmer, Morgantown.

Medical-Dental Liaison: George L. Armbrecht, Wheeling, Chairman; Gene Lee Hackleman, Huntington; and James A. Thompson, Clarksburg.

Nurses Liaison: Richard E. Flood, Weirton, Chairman; Billie M. Atkinson, Parkersburg; Jean P. Cavender, Charleston; John J. Mahood, Bluefield; and L. J. Pace, Princeton.

Legislative

Frank J. Holroyd, Princeton, Co-Chairman; Charles W. Merritt, Beckley, Co-Chairman; W. P. Bittinger, Oak Hill; A. Paul Brooks, North Parkersburg; William H. Carter, Williamson; John T. Chambers, Charleston; George A. Curry, Morgantown; Del Roy R. Davis, Kingwood; Vernon E. Duckwall, Elkins; Roy A. Edwards, Jr., Huntington; A. C. Esposito, Huntington; George Gevas, Parkersburg; William E. Gilmore, Parkersburg; Paul E. Gordon, Clarksburg; Louis W. Groves, Jr., Richwood; N. B. Groves, Martinsburg; Carl B. Hall, Charleston; John M. Hartman, Charleston; John A. B. Holt, Charleston; J. C. Huffman, Buckhannon; M. V. Kalaycioglu, Shinnston; Milton J. Lilly, Jr., Charleston; Paul L. McCuskey, Parkersburg; Worthy W. McKinney, Beckley; Joseph D. Romino, Fairmont; Carl J. Roncaglione, Charleston; Robert G. Shirey, Lewisburg; Jack J. Stark, Belpre, Ohio; Pat A. Tuckwiller, Charleston; A. J. Villani, Welch; Lyle D. Vincent, Parkersburg; David E. Wallace, Madison; Stephen D. Ward, Wheeling; Henry F. Warden, Jr., Bluefield; Robert R. Weiler, Wheeling; and J. Hugh Wiley, Morgantown.

Maternal and Perinatal Fetal Welfare

Frederick H. Dobbs, Charleston, Chairman; Kenneth J. Allen, Glen Dale; Walter A. Bonney, Jr., Morgantown; Thomas J. Conaty, Huntington; Robert D. Crooks, Parkersburg; Larry D. Curnutte, Charleston; T. Keith Edwards, Bluefield; Thomas G. Folsom, Huntington; George Gevas, Parkersburg; Robert Greco, Morgantown; George L. Grubb, Charleston; C. S. Harrison, Clarksburg; Edwin J. Humphrey, III, Huntington; W. Gene Klingberg, Morgantown; George S. Kosar, Weirton; A. Robert Marks, Clarksburg; William A. Neal, Morgantown; Thomas G. Potterfield, Charleston; Robert P. Pulliam, Beckley; Herman Rubin, Wheeling; C. L. Terlizzi, Huntington; Gates J. Wayburn, Huntington; Charles A. White, Morgantown; Patrick C. Williams, Jr., Charleston; and Gilbert A. Ratcliff, Jr., Huntington.

Sub-Committee on Perinatal Fetal Welfare

W. Gene Klingberg, Chairman; Robert D. Crooks, A. Robert Marks, William A. Neal and Thomas G. Potterfield.

Medical Aspects of Sports

K. Douglas Bowers, Jr., Morgantown, Chairman; Colin M. Craythorne, Huntington, Vice Chairman; Gary G. Gilbert, Huntington; Henry R. Glass, Jr., Charleston; Joe N. Jarrett, Oak Hill; James S. Kessel, Ripley; Jack C. Morgan, Fairmont; George Naymick, Weirton; W. H. Rardin, Beckley; Carl J. Roncaglione, Charleston; George W. Rose, Clarksburg; Michael A. Santer, Jr., Parkersburg; J. G. Vazquez, Grantsville; Herbert E. Warden, Morgantown; and Moseley H. Winkler, Charleston.

Medical Education and Hospitals

N. LeRoy Lapp, Morgantown, Chairman; Charles E. Andrews, Morgantown; Leo H. T. Bernstein, Martinsburg; Rowland H. Burns, Huntington; William H. Carter, Charleston; John S. Cook, Welch; Creel S. Cornwell, Jr., Clarksburg; Del Roy R. Davis, Kingwood; C. Richard Daniel, Beckley; Thomas O. Dotson, White Sulphur Springs; William J. Echols, Huntington; T. Keith Edwards, Bluefield; Albert C. Esposito, Huntington; Alfred D. Ghaphery, Wheeling; Robert D. Hess, Bridgeport; Winfield C. John, Huntington; George M. Kellas, Wheeling; George S. Kosar, Weirton; Mary Lou L. Lewis, Charleston; William O. McMillan, Jr., Charleston; David Z. Morgan, Morgantown; Dennis S. O'Connor, Huntington; John F. Otto, Jr., Huntington; Benjamin L. Plybon, Ronceverte; Herbert H. Pomerance, Charleston; Edwin M. Shepherd, Charleston; L. Dale Simmons, Clarksburg; Hartwell G. Thompson, Charleston; C. Carl Tully, South Charleston; Charles E. Turner, Huntington; J. Hugh Wiley, Morgantown; and Roy James Yates, Beckley.

Medical Scholarships

Martha Jane Coyner, Harrisville, Chairman; R. L. Chamberlain, Buckhannon; Marshall J. Carper, South Charleston; Robert D. Hess, Bridgeport; Thomas J. Holbrook, Huntington; Russel Kessel, Charleston; John Mark Moore, Wheeling; Arthur L. Poffenbarger, Charleston; and Clark K. Sleeth, Morgantown.

Mental Health

Roy A. Edwards, Jr., Huntington, Chairman; Humberto Escandon, Parkersburg; Mildred Mitchell-Bateman, Charleston; Randall Connolly, Vienna; Florence K. Hoback, Huntington; Miroslav Kovacevich, Charleston; L. J. Pace, Princeton; Robert E. Sams, Parkersburg; A. L. Wanner, Wheeling; Stephen D. Ward, Wheeling; Deleno H. Webb, III, Huntington; Charles C. Weise, Charleston; and A. C. Woofter, Parkersburg.

Military Medical Affairs

Russel Kessel, Charleston, Chairman; Bert Bradford, Jr., Charleston; Robert D. Hess, Bridgeport; and Logan W. Hovis, Vienna.

Program

Robert D. Hess, Bridgeport, Chairman; Carl B. Hall, Charleston; John J. Mahood, Bluefield; Robert P. Pulliam, Beckley; Lyle D. Vincent, Parkersburg; and Alvin L. Watne, Morgantown.

Public Service

Albert C. Esposito, Huntington, Chairman; C. R. Davisson, Weston; Leonard M. Eckmann, South Charleston; G. Thomas Evans, Fairmont; Louis W. Groves, Jr., Richwood; N. B. Groves, Martinsburg; E. Lee Jones, Wheeling; C. A. Logue, Morgantown; George E. McCarty, Parkersburg; Charles W. Merritt, Beckley; L. J. Pace, Princeton; Jack J. Stark, Belpre, Ohio; Stephen D. Ward, Wheeling; and A. J. Weaver, Clarksburg.

Resolutions

Richard E. Flood, Weirton, Chairman; George R. Callender, Jr., Charleston; William E. Gilmore, Parkersburg; Winfield C. John, Huntington; Worthy W. McKinney, Beckley; L. J. Pace, Princeton; and Harry S. Weeks, Jr., Wheeling.

Rural Health

Martha Jane Coyner, Harrisville, Chairman; Harold D. Almond, Buckhannon; J. C. Arnett, Rowlesburg; Ralph H. Boone, Kingwood; B. S. Brake, Clarksburg; Robert W. Coplin, Elizabeth; Del Roy R. Davis, Kingwood; N. H. Dyer, Charleston; Vernon L. Dyer, Petersburg; Earl L. Fisher, Gassaway; Robert R. Frye, Manmington; O. M. Harper, Clendenin; Mehmet V. Kalaycioglu, Shinnston; Charles T. Lively, Weston; Ralph McGraw, Follansbee; Joseph B. Reed, Buckhannon; Charles J. Sites, Franklin; and Charles E. Staats, Charleston.

Tuberculosis

Hugh S. Edwards, Beckley, Chairman; J. N. Aceto, Wheeling; Charles E. Andrews, Morgantown; Robert M. Biddle, Parkersburg; J. M. Brand, Chester; William L. Cooke, Charleston; N. Allen Dyer, Princeton; George F. Evans, Clarksburg; Dominic J. Gaziano, Charleston; Ralph H. Nestmann, Charleston; Robert J. Reed, III, Wheeling; James T. Smith, Charleston; Donald P. Stacks, Huntington; Harry Karl Tweel, Huntington; M. A. Viggiano, New Martinsville; James H. Walker, Charleston; and David H. Williams, Weirton.

Venereal Disease

N. H. Dyer, Charleston, Chairman; Frank J. Burian, Williamson; Donald E. Farmer, Charleston; C. Y. Moser, Kingwood; William L. Neal, Huntington; Frank M. Peck, Huntington; David S. Pugh, Chester; Page H. Seekford, Charleston; Thomas L. Thomas, Wheeling; M. A. Viggiano, New Martinsville; Lyle D. Vincent, Parkersburg; K. William Waterson, Wheeling; and Isaiah A. Wiles, Morgantown.

SPECIAL COMMITTEES
AMA-ERF

J. Keith Pickens, Clarksburg, Chairman; Irwin M. Bogarad, Weirton; Russell R. Brandon, Chesapeake, Ohio; Harry F. Cooper, Beckley; John E. Echols, Richwood; John H. Gile, Parkersburg; Joseph Gilman, Clarksburg; Daniel Hale, Princeton; Robert W. Howes, Jr., Parkersburg; Joe N. Jarrett, Oak Hill; M. Bruce Martin, Huntington; William T. Lawson, Fairmont; Buford W. McNeer, Hinton; David Z. Morgan, Morgantown; Donald R. Roberts, Elkins; George A. Shawkey, Charleston; John W. Trenton, Kingwood; Lysle T. Veach, Petersburg; and E. Andrew Zepp, Martinsburg.

School Health

Peter A. Haley, Charleston, Chairman; R. J. Bailey, Parkersburg; J. M. Brand, Chester; Hugh M. Brown, Clarksburg; Thomas G. Folsom, Huntington; Grover C. Hedrick, Jr., Beckley; Robert G. Janes, Fairmont; Edward Shupala, Parkersburg; Thomas L. Thomas, Wheeling; and Eli J. Weller, Weirton.

WVU Liaison

Robert D. Hess, Bridgeport, Chairman; Kenneth J. Allen, Glen Dale; William E. Barnes, Parkersburg; Dewey F. Bensenhaver, Petersburg; Robert W. Bess, Jr., Piedmont; R. S. Birckhead, Gauley Bridge; W. T. Booher, Jr., Wellsburg; K. Douglas Bowers, Jr., Morgantown; A. Kyle Bush, Philippi; Terrell Coffield, New Martinsville; C. Richard Daniel, Beckley; Del Roy R. Davis, Kingwood; G. Thomas Evans, Fairmont; Donald E. Farmer, Charleston; Richard E. Flood, Weirton; John M. Grubb, Pt. Pleasant; Carl B. Hall, Charleston; J. C. Huffman, Buckhannon; Joe N. Jarrett, Oak Hill; Ray M. Kessel, Logan; Kenneth G. MacDonald, Charleston; Charles H. McKown, Jr., Huntington; Ross E. Newman, Mullens; L. J. Pace, Princeton; Robert R. Pittman, Martinsburg; Russell A. Salton, Williamson; Robert G. Shirey, Lewisburg; L. Dale Simmons, Clarksburg; John W. Traubert, Morgantown; A. J. Villani, Welch; David E. Wallace, Madison; Deleno H. Webb, III, Huntington; and J. Hugh Wiley, Morgantown.

Winners Named In Medical Golf, Tennis, Skeet Tournaments

Dr. William C Morgan, Jr., of Charleston won low gross honors for physicians, and the first "leg" on a new trophy, in the annual Medical Golf Tournament held in conjunction with the State Medical Association's Annual Meeting in White Sulphur Springs, August 20-23.

Dr. George A. Curry of Morgantown retired the former trophy awarded in the tournament by winning it for the third time in 1974.

Following Doctor Morgan in the low gross scoring this year were Drs. L. Dale Simmons of Clarksburg; Curry, who also scored the most birdies; and Dr. Joseph T. Mallamo, Fairmont.

Low net honors went to Dr. Arthur A. Abplanalp of Charleston, followed by Drs. T. F. Hall II, of Fairmont, Terrell Coffield of New Martinsville, C. R. Davisson of Weston and Robert D. Hess, Bridgeport.

The team of Drs. Prospero B. Gogo of Beckley and David A. Bowman, Lewisburg, won the men's tennis honors, followed by the duos of Drs. W. S. Hotchkiss, Norfolk, Virginia, and Ed Zakaib, Richmond, Virginia; and Drs. Thomas J. Janicki and Alberto G. Capinpin, both of Charleston.

The winning team in the women's tennis play was made up of Mrs. C. Richard Daniel of Beckley and Mrs. William Revercomb, Charleston. Mrs. Prospero B. Gogo of Beckley and Mrs. Alberto G. Capinpin of Charleston took second honors.

The skeet tournament winners were Drs. Cordell A. de la Pena, Clarksburg, and O. M. Harper, Clendenin.

State Ophth.-Otol. Academy Sets Spring Meeting

The National Spring Meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held April 25-28, 1976, at The Greenbrier in White Sulphur Springs, it was announced by Dr. J. Elliott Blaydes, Jr., of Bluefield, Secretary-Treasurer.

Ophthalmology speakers will include Drs. John P. Beale, Jr., San Francisco; Pierre Guibor, New York City; Norman S. Jaffe, North Miami Beach, Florida; Irving H. Leopold, Newport Beach, California; and David Paton, Houston, Texas.

Otolaryngology speakers will be Drs. B. R. Alford, Houston; G. Jan Beekhuis, Detroit; Julius N. Hicks, Birmingham, Alabama; and John Turner, Atlanta.

Hotel accommodations should be arranged directly with The Greenbrier. Checks for the registration fee of $150 should be made payable to The West Virginia Academy of Ophthalmology and Otolaryngology, and addressed to J. Ellott Blaydes, Jr., M. D., The Blaydes Clinic, Between North and Frederick on Woodland Avenue, Bluefield.

Association Scholarship To WVU Goes To Dennis R. Perenyi

The State Medical Association has awarded one of its four 1975 scholarships to the West Virginia University School of Medicine to Dennis R. Perenyi of Morgantown, it was announced by Dr. Martha Jane Coyner of Harrisville, Chairman of the Association's Committee on Medical Scholarships.

Doctor Coyner said that Perenyi was named to replace Samuel D. Hensley, Jr., of Dry Branch (Kanawha County), who surrendered his Association scholarship for another scholarship from the U. S. Air Force.

(Continued on next page)

(Continued from Page 307)

Perenyi, 21, received a B. S. degree in biology and chemistry last spring from WVU. He is the son of Andrew J. Perenyi of Hyattsville, Maryland, and Mrs. Dolores M. Perenyi of Clairton, Pennsylvania.

Perenyi becomes the second 1975 Association scholarship recipient to replace one of the four original recipients. It was announced previously that Michael A. Kress of Wheeling had been named to replace Francis M. Cyran of Vienna, who surrendered his Association scholarship for a scholarship from the U. S. Navy.

In addition to Perenyi and Kress, the other 1975 Association scholarship recipients are Rosemarie Cannarella of Follansbee and Mary S. Boyd of Huntington. The four recipients will receive $1,000 for each of the four years while enrolled in the School of Medicine.

State Surgeons Set Morgantown Program For November

The West Virginia Chapter of the American College of Surgeons and the Department of Surgery, West Virginia University School of Medicine, will present a Chapter Fall Meeting and Continuing Education Program, November 7-8, in Morgantown. The program topic will be "Surgery of the Major Blood Vessels."

Serving on the guest faculty will be Henry T. Bahnson, M. D., Professor and Chairman, Department of Surgery, University of Pittsburgh; and Thomas R. Linger, M. D., Staff Surgeon, Charleston Area Medical Center.

Friday Session

The program on Friday, November 7, will be held in the WVU Medical Center Auditorium. Registration will begin at 8:30 A. M. in the auditorium foyer, followed by welcoming remarks from Dr. David Z. Morgan, Associate Dean, WVU School of Medicine, at 9 A. M.

The speakers for the morning session (all WVU faculty members) and their topics will be "Obstructive Atherosclerosis: Current Concepts of Etiology and Pathogenesis"—Nathaniel F. Rodman, M. D., Professor and Chairman, Department of Pathology; "Diagnostic Angiography"— Dominic A. Antico, M. D., Assistant Professor of Radiology;

Henry T. Bahnson, M. D.

Alvin L. Watne, M. D.

"Ultrasound: The Noninvasive Means for Evaluating the Aorta"—Michael T. Hogan, M. D., Assistant Professor of Radiology; and "Concepts in Anesthetic Management During Surgery for Aortoiliac Disease"—Richard B. Knapp, M. D., Professor and Chairman, Department of Anesthesiology.

Speakers and their topics for the Friday afternoon session will be "Carotid Artery Disease"—G. Robert Nugent, M. D., Professor and Chairman, Division of Neurosurgery, WVU; "Abdominal Angina"—Robert J. Gardner, M. D., Associate Professor of Surgery, WVU; "Occlusive Aortic-Iliac Disease"—Thomas J. Tarnay, M. D., Professor of Surgery, WVU; and "The Treatment of Aortic Aneurysms"—Doctor Bahnson.

Saturday Session

The Saturday, November 8, session will be held at the Lakeview Inn and Country Club in Morgantown, beginning at 9 A. M. following registration starting at 8:30 A. M. The speakers and their topics will be "Aortic Mycotic Abdominal Aneurysm Involving All Branches Excision and Graft Replacement"—Edwin C. James, M. D., Associate Professor of Surgery, WVU; "Traumatic Rupture of Aorta"—Doctor Gardner; and "Acute Aortic Dissection"—Doctor Bahnson. There also will be Vascular Surgery Videotapes and a Panel Discussion by Drs. Bahnson, Gardner, Linger, Tarnay, and Dr. Herbert E. Warden, Professor and Head, Section of Thoracic and Cardiovascular Surgery, WVU.

The continuing medical education program meets the criteria for nine hours of credit in Category 1 for the Physician's Recognition Award of the American Medical Association.

Henry T. Bahnson, M. D.

Doctor Bahnson, a native of Winston-Salem, North Carolina, has held his present post at the University of Pittsburgh since 1963. He is a Diplomate of the American Board of Surgery and the American Board of Thoracic Surgery, and is a Fellow of the American College of Surgeons.

He was graduated from Davidson College and received his M. D. degree (cum laude) in 1944 from Harvard Medical School. He served an internship in surgery at Johns Hopkins Hospital and, following an interruption to serve one year of active duty with the U. S. Navy in 1945-46, returned to Johns Hopkins for his residency. Doctor Bahnson held various other posts at that hospital and Johns Hopkins University, serving as Professor of Surgery in 1961-62 before going to the University of Pittsburgh. He is Treasurer of the International Society of Surgery and President Elect of the American Association for Thoracic Surgery.

Dr. Alvin L. Watne, Professor and Chairman, WVU Department of Surgery, will serve as program

chairman for the Friday morning session. Other program chairmen will be Dr. William E. Lawton, Jr., of Charleston, President of the West Virginia Chapter, ACS, Friday afternoon; and Dr. Alfred D. Ghaphery, Wheeling, First Vice President of the West Virginia Chapter, ACS, Saturday.

Advance registration and pre-payment of activities fees are required. For information contact Dr. Alvin L. Watne, West Virginia University, Department of Surgery, Morgantown 26506 (phone (304) 293-3311).

Hal Wanger Family Practice Conference Continuing

The Hal Wanger Family Practice Conference for the State's family physicians was to be held October 2 and 3 at the West Virginia University Medical Center in Morgantown.

Program topics scheduled included:

"Revisiting Anemia," "Managing Cardiac Arrhythmias," "Mechanisms of Common Drug Interactions," "Hypertensive Management," "Diagnostic Radiology," "The Walking Depressed," "VD—Update," "Diagnosis and Management of Pediatric Diabetic;"

"New Drugs and Indications," "Progress in Cancer Chemotherapy," "Contraception 1975," and "National Antibiotic Therapy Test."

Dr. Halvard Wanger of Shepherdstown originated and, for many years, conducted the Potomac-Shenandoah Valley Postgraduate Institute. Prior to this year's conference, Dr. John W. Traubert, Chairman of the Department of Family Practice at WVU, and President of the West Virginia Chapter, American Academy of Family Physicians, announced:

"Due to reasons of health, Doctor Wanger is no longer able to carry on these efforts. The West Virginia Academy of Family Physicians and the Department of Family Practice at West Virginia University feel that Doctor Wanger epitomizes continued medical education in West Virginia. In an attempt to carry on these efforts a fall conference will be initiated this year at the West Virginia University Medical Center. . . ."

Regional ACP Meeting To Be Held In Morgantown, Oct. 31-Nov. 1

The West Virginia Western Pennsylvania Regional Meeting of the American College of Physicians (ACP) will be held October 31 and November 1 in Morgantown. Attending the two-day scientific meeting will be specialists in internal medicine and related medical fields.

The regional meeting is one of more than 30 such sessions held each year throughout the United States and Canada to bring physicians up-to-date on late developments in the field of internal medicine.

Dr. John E. Jones, Dean of the West Virginia University School of Medicine, will be in charge of arrangements. For further information, contact Doctor Jones.

The meeting has been approved for credit toward the American Medical Association's Physician's Recognition Award in Category 1.

Upcoming ACP postgraduate courses include "Endocrine, Metabolic and Genetic Disease: Clinical Application of Basic Advances," October 20-23, Duke University Medical Center, Durham, North Carolina; "Contemporary Internal Medicine," October 20-24, Cornell University Medical College, New York City; and "Liver Diseases and the Internist," November 2-3, Ambassador Hotels, Chicago. For information and registration, contact Registrar, Postgraduate Courses, ACP, 4200 Pine Street, Philadelphia, Pennsylvania 19104.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Oct. 1-3—W. Va. Hospital Assn., White Sulphur Springs.

Oct. 2-3—Hal Wanger Family Practice Conference, Morgantown.

Oct. 3-4—ASIM, Portland

Oct. 6-8—Pennsylvania Med. Society, Lancaster.

Oct. 6-9—AAFP, Chicago.

Oct. 7-9—Am. College of Emergency Physicians, Las Vegas.

Oct. 13-17—Am. College of Surgeons, San Francisco.

Oct. 18-23—Am. Acad. of Pediatrics, Washington, D. C.

Oct. 23-26—Med. Society of Virginia, Roanoke.

Oct. 26-30—Amer. College of Chest Physicians, Anaheim, Calif.

Oct. 30—Trauma & Care of the Critically Injured (Ohio Co. Medical Society), Wheeling.

Oct. 31-Nov. 1—W. Va./Western Pa. Regional Meeting, ACP, Morgantown.

Oct. 31-Nov. 1—Seminar in Clinical Microbiology (WVU School of Medicine and Am. Society of Clinical Pathologists), Morgantown.

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 7-8—W. Va. Chapter, ACS, and Dept. of Surgery, WVU, Morgantown.

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

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Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called patient package insert has been around for a long time. Many physicians alread use written instruction sheets to provide patients with information about the drugs they are taking. And some physicians give verbal instructions; but in too many instances these are what I call eye-glazing exercises. I have seen patients sit with glazed eyes listening to a rapid-fire lecture by a hurried physician who has 20 people out in his waiting room. These patients aren't given sufficient understanding and therefore do not follow instructions. So I think the idea of an official package insert for patients is a good one. Perhaps we should really think of this kind of information simply as an extension of drug labeling.

The benefits of patient involvement

Many physicians may not realize how frequently a patient obtains his drug information from Aunt Tillie or the next door neighbor. And this information is almost always bad or irrelevant to the case at hand. Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his prescription, is a bill.

As an educator I am impressed by the principle that the best way to get someone to do something is to involve him in the process. So the

I think there are advantages as well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medical terms to describe complications or possible sequelae of disease or treatment, you may frighten the patient—particularly since the more highly sophisticated patient is not the one who is going to read the insert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a package insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may possibly outweigh the potential good.

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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WVU Medical Center
—News—

A West Virginia University Medical Center urologist leads all surgeons in the eastern United States in performance of a procedure to restore near normal bladder function in paraplegics.

Dr. Stanley Kandzari, Associate Professor at the WVU School of Medicine, has implanted eight pacemakers in paralyzed patients in the last year. The pacemaker substitutes electrical stimulation for lost nerve impulse in the urinary bladder caused by damage to the spinal cord.

The procedures have been performed under the leadership of Dr. D. Franklin Milam, Chairman of the Division of Urology, Department of Surgery.

Seven of these operations have been in children with a myelomeningocele (spina bifida), the so-called open spine. These children suffer from both urinary and fecal incontinence. The other procedure was on the victim of a gunshot wound of the spine.

"We have had good success in controlling the neurologic bladder with the pacemaker," said Doctor Kandzari. "The operation itself takes about an hour. It frees the patient from the catheter or a urinary ostomy."

The pacemaker system used to control bladder function actually consists of two parts—the pacemaker, which is implanted in the lower left abdomen with its electrodes attached to the bladder wall—and the external transmitter, or stimulator, which is carried by the patient.

The silicone-covered pacemaker contains transistors but no batteries and is designed to last a lifetime. Because the pacemaker receives its power from the stimulator, there is no need for later surgry to replace batteries as heart pacemakers require.

Doctor Kandzari said the pacemaker responds only to the stimulator and, unlike the heart pacemaker, is not affected by other electrical equipment such as microwave ovens and automatic door opening devices.

The 30-volt stimulator, which resembles a remote control device such as those used for television sets, is battery-powered. Some models may be connected to an electrical outlet, but all stimulators used with pacemakers implanted at the Medical Center use batteries.

The batteries are rechargeable and should last many years without replacement. The stimulator can be used for up to five days without recharging but usually is recharged every two or three days by connection to an electrical outlet with the recharger cord and unit provided.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

To empty the bladder, the patient holds the stimulator against the implanted pacemaker and activates it by pressing the switch. The pacemaker sends electrical impulses through the electrodes to the bladder motor nerves which cause the organ muscles to contract.

The adult pacemaker with four electrodes costs $1,500. The two-electrode pediatric pacemaker is $1,250.

Doctor Kandzari said the Division of Crippled Children's Services, West Virginia Department of Welfare, had borne the cost of the pacemakers implanted in the seven children. Most insurance plans cover the cost of the pacemaker and surgery.

Correcting bladder dysfunction resulting from spinal cord injury has long presented a challenge to medical researchers.

Previous methods of correcting the problem had serious complications. Patients required to wear indwelling catheters often were plagued with infections or got stones which resulted in progressive kidney damage. Inadequately emptied bladders caused reflux—the backing up of urine into the kidneys which resulted in renal deterioration.

Dr. Stanley Kandzari, who has implanted more bladder pacemakers than any surgeon in the Eastern United States, holds the pacemaker with its attached electrodes and the stimulator used to activate the device. With him is Dr. D. Franklin Milam, Professor and Chairman of the Division of Urology in the WVU Department of Surgery.

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The Month in Washington

CONGRESS deserted Washington for a summer holiday, leaving behind not only the August heat of the Potomac swamplands but also most of its planned health legislation still hanging up in the humid air.

With passage of national health insurance (NHI) written off for this year, both the Senate and House on return will tackle a variety of health or health-related matters including health manpower, already passed by the House, amendments to the Health Maintenance Organizations Act (HMO), and possible changes to the Medicare law.

While the Health Subcommittee of the House Ways and Means Committee has scheduled public hearings on NHI for October 28, Subcommittee Chairman Daniel D. Rostenkowski (D-Ill.) stated "the considerable lead time needed to forge a NHI bill" as the unexpected reason for hearings this year.

Pressing problems with Medicare, however, prompted Rep. Rostenkowski to schedule hearings in September on possible changes to that law.

"Recent oversight hearings concerned certain HEW regulations, including those on utilization review and the eight-and-one-half per cent nursing care differential. As we consider Medicare changes, I expect that we will explore the possibility of major modifications in the way hospitals are reimbursed. And we will look at how Medicare may help hospitals facing steep increases in malpractice insurance rates," Rep. Rostenkowski said.

The subcommittee probably will draft legislation to change some of the present Medicare regulations. There may not be time for final Congressional action this year, but legislation could clear Congress next year.

Many of the revisions the subcommittee members are considering would be welcome to the medical profession.

One topic of the hearing was the present law's requirement that physicians' Medicare reimbursement be tied to a type of cost-of-living index and geared to the 75th percentile of normal and customary charges. The American Medical Association has challenged the fairness of HEW's proposed index and warned that the regulation could drive increasing numbers of physicians away from assignment. Another hearing subject was "physicians' services reimbursement — possible basic changes in the present 'reasonable charge' system."

• **From the Washington Office of the American Medical Association.**

Two other controversial Medicare regulations are up for review—possible revisions in Professional Standards Review Organizations (PSRO) provisions, and utilization review requirements for hospitals, the latter under temporary injunction by the federal courts as a result of an AMA court protest.

Other issues to be considered by the subcommittee:

—Termination of the eight-and-one-half per cent nursing differential in hospital costs;

—Redefinition of reasonable cost level for hospitals (90th to 80th percentile and revised hospital classification system);

—Nurse staffing requirements in rural hospitals (authority to waive certain requirements with respect to nurse staffing requirements in rural hospitals expires on January 1, 1976).

—Medicare relationship to Federal Employee Health Program (no payment may be made under Medicare, beginning January 1, 1976, for services provided to members of the Federal Employee Plan unless a system of coordination between two programs is developed under present law).

—Revisions in hemodialysis and kidney transplant provision to improve administration and enhance cost effectiveness.

—Revisions in home health care provisions.

—Medicare Part B premium increase provision—correction of technical error in present law which precludes increasing the premiums.

—Institutional services reimbursement—possible basic changes from the present retroactive reasonable cost reimbursement.

—Consideration of a specific proposal, with respect to malpractice, to permit hospitals to self-insure and charge such costs to Medicare.

—Revisions in current coverage of ambulance services.

—Coverage of pap smears under Medicare, Part B.

—Possible changes in payment methods for physicians' services when patient is deceased.

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P. C. Corro, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Obituaries

CHARLES M. FLESHMAN, M. D.

Dr. Charles M. Fleshman of Savannah, Georgia, a native of Greenbrier County, died on September 7 in Savannah. He was 79. Doctor Fleshman, who received his M. D. degree in 1922 from the University of Louisville School of Medicine, once practiced in Clendenin and Prestonsburg, Kentucky. A veteran of World War I, he was a former member of the West Virginia State Medical Association and the Kanawha Medical Society.

Survivors include the widow; two daughters, Mrs. John D. Crawford of Savannah and Mrs. Eric T. Weber of St. Albans; a brother, Dr. K. W. Fleshman of Rainelle; and a sister, Mrs. Pauline Osborne of Clendenin.

* * *

MARGUERITTE J. KERSEY, M. D.

Dr. Margueritte J. Kersey of Peterstown died on August 8 in a Bluefield hospital. She was 59. An ophthalmologist, Doctor Kersey was a native of Columbia, South Carolina. She was located in Bartley (McDowell County) for five years prior to going to Peterstown in 1955, where she was in practice with her husband, Dr. W. W. Kersey, Jr.

Surviving in addition to the husband are a son, W. W. Kersey, III, of Peterstown; a daughter, Margueritte E. Carman, Peterstown; a brother, L. B. Johnson, Jr., Farmville, North Carolina; and a sister, Mrs. Juanita Cockrell, Columbia, South Carolina.

Scholarships Awarded To Five WVU Medical Students

Scholarships for five students at the West Virginia School of Medicine have been granted by the Attorney General of West Virginia Public Health Trust. The scholarships, awarded through the office of Attorney General Chauncey H. Browning, Jr., were effective with the beginning of the current academic year.

Two first-year students, Marilee Benson of Wheeling and James M. Kyle of Athens, will receive $1,000 for each of the four years while enrolled in the School of Medicine.

Scholarships of $1,000 for the current academic year were granted to three other students. They are William N. Payne, Huntington, second-year student; David O. Wright, Charleston, third-year; and George J. Linsenmeyer, Huntington, fourth-year.

Included among members of the Board of Trustees of the trust fund are Drs. N. H. Dyer and Mildred Mitchell-Bateman of Charleston and the President of the West Virginia State Medical Association.

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Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

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OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology
Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
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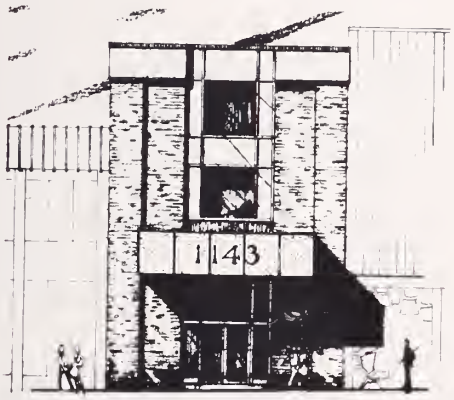

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Resolutions

Editor's Note: Here is a complete text of resolutions approved, in the form in which they were finally adopted, at the second and final House of Delegates session during the West Virginia State Medical Association's 108th Annual Meeting at The Greenbrier, August 20-23:

Resolution No. 1—Medical Advisors' Ethics—By The Kanawha Medical Society.

WHEREAS, Medical advisors to private and public agencies directly link their respective agencies to the practicing medical populations nationally, locally and individually; and

WHEREAS, The harmony of physician-agency rapport is significantly influenced by the medical advisors' reflections toward the physician and his organizations (witness the statewide disruptive relations between the State Department of Welfare during 1959-1963, Division of Vocational Rehabilitation always, Workmen's Compensation Commission during 1965-1969, and the United Mine Workers of America, 1945 to present); and

WHEREAS, Physicians individually and collectively are concerned with the behavioral ethics of said medical advisors, be they agency hired or appointed with the advice and consent of their peers;

THEREFORE, BE IT RESOLVED, That the conduct and attitude of an agency medical advisor be examined thoroughly when any significant disharmony develops involving any said agency, first at the county level and, if necessary, at the state level; and

BE IT FURTHER RESOLVED, That where found to be desirable and appropriate, changes be made in the West Virginia State Medical Association and component societies' constitutions and/or by-laws to provide rules of conduct and ethics for medical advisors.

Resolution No. 2—Professional Liability—By The Kanawha Medical Society.

WHEREAS, West Virginia physicians now face the possibility that within the next few months medical liability insurance may be available only at a cost which will put it beyond reach; and

WHEREAS, Even a single malpractice suit could bankrupt a physician; and

WHEREAS, This has already affected the quality of medical care; and

WHEREAS, This may soon cause a drastic redution in medical services available; and

WHEREAS, Many malpractice suits today are filed recklessly, indifferently and some maliciously, simply in hopes of intimidating the doctor and his insurance company to settle out of court; and

WHEREAS, Malpractice lawyers have been notoriously successful in winning larger awards and settlements, some in the millions of dollars; and

WHEREAS, The courts and juries have not always distinguished between medical negligence and "poor results" that will occur despite conscientious medical care;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association seek passage of legislation to correct the faults of our present medical liability system and consider, in particular, (1) a limitation on the size of malpractice awards, (2) a shortening of the statute of limitations, (3) a limitation on lawyers' contingency fees, (4) a more clear definition of "informed consent," (5) elimination of the doctrine of "re ipsa loquitur," (6) some limitations on "guarantee of result," and (7) institution of pre-trial review panels for all suits, with their findings to be admissible in court.

Resolution No. 3—Medical Freedom of Miners—By The Kanawha Medical Society.

WHEREAS, The West Virginia State Medical Association adopted in 1974 a resolution declaring its support of medical freedom of miners and formed an ad hoc committee to confer with the officers of the UMWA Welfare and Retirement Fund; and

WHEREAS, The said ad hoc committee has twice met with Drs. Donald Chadwick and Robert Smith, who represent the United Mine Workers in West Virginia, to accomplish this mission; and

WHEREAS, Doctors Chadwick and Smith clearly agreed verbally before 13 witnesses of the ad hoc committee (but not so clearly in writing) to observe and honor all of the principles of the August, 1974, West Virginia State Medical Association resolution, except the most important INTENT of that Resolution, namely, the termination of the practice of maintaining and publishing a list of approved physicians; and

WHEREAS, Maintenance of a list of approved physicians can negate the principles of freedom of choice, interfere with and frustrate the fee for service tenet, and make a mockery of the fundamental principles essential to the practice of quality medical care; and

WHEREAS, Doctor Chadwick has indicated that there is no intent to use the list as a punitive measure without utilization of the grievance processes available in component medical societies and the West Virginia State Medical Association;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association request the Trustees of the UMWA, its President and/or any other responsible officers to provide a detailed and written policy statement setting forth the aims, objectives and operating procedures related to the use of approved lists of physicians and other features of the UMWA program; and

BE IT FURTHER RESOLVED, That if this policy statement is not provided within 60 days, the West Virginia State Medical Association condemn the United Mine Workers Retirement Fund for activities which interfere with the private practice of medi-

cine in providing continuing quality medical care for UMWA Fund beneficiaries and totally disregard the established mechanisms for quality control in the name of economic responsibility.

Resolution No. 4—Preservation of National Sovereignty—By The Kanawha Medical Society.

WHEREAS, Physicians are citizens of the United States of America and as such should be interested in maintaining our national sovereignty; and

WHEREAS, National sovereignty is directly affected by the type of medical care system endorsed by a country; and

WHEREAS, Most of the nations of Western Europe and England and many of the less developed nations of the world which have implemented government programs for the provision of medical care to their citizens have met with economic problems bordering on national bankruptcy placing their national sovereignty in great jeopardy; and

WHEREAS, We have had and are experiencing serious fiscal dilemmas with our own Medicare, Medicaid, Social Security and other government-directed medical care plans, and also with non-government plans, including the Kaiser type and the United Mine Workers of America Hospital chain (which folded in just nine years despite the infusion of millions of public dollars); and

WHEREAS, We are now faced with the financially absurd Standards of Primary Health Care draft of the West Virginia Comprehensive Health Planning Advisory Council, and the annual specter of economically disastrous national health proposals; and

WHEREAS, The problems relating to medical care and distribution can best be corrected in a nation which is sovereign and solvent;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association endorse a system of free market medicine based on the principle of freedom of choice for the patient and physician alike; fee for service, and strict confidentiality; and

BE IT FURTHER RESOLVED, That the West Virginia State Medical Association forward a copy of this Resolution to the American Medical Association for proper review and consideration during the AMA's Annual Clinical Convention in Hawaii in December, 1975.

Resolution No. 5—Workmen's Compensation Rules and Regulations—By The Kanawha Medical Society.

WHEREAS, Section 14, 14.01 of the Rules and Regulations of the West Virginia Workmen's Compensation Fund has not been the subject of any discord since its enactment in 1969, but its great potential for abuse must be acknowledged by all in a less favorable political setting;

THEREFORE, BE IT RESOLVED, That the Kanawha Medical Society ask the West Virginia State Medical Association to examine its constitutionality and move forthwith to achieve repeal of Section 14, 14.01 and that part of the West Virginia code which provides such authority.

(Here, for information, is the material involved: *SECTION 14. Payment for Medical and Other Services. 14.01 Additional charges to claimant prohibited.* When a physician, surgeon, hospital or other person, firm or corporation renders services to a claimant who is covered under the Workmen's Compensation Statute, the physician, surgeon, hospital or other person, firm or corporation is prohibited from charging the claimant or the employer any additional amount to supplement fees paid by the Commissioner for services rendered. Additional services and accommodations not reasonably required for treatment of the compensable injury but requested by the claimant shall be the responsibility of the claimant. Failure on the part of the physician, surgeon, hospital or other person, firm or corporation to submit fee bills to the Commissioner for services rendered within the statutory period prohibits collection from the injured employee, the employer or the Fund.)

(Upon the recommendation of the Resolutions Committee, this resolution was referred to the Legislative Committee of the West Virginia State Medical Association for appropriate implementation.)

Resolution No. 6—Medical Education Report—By The Kanawha Medical Society.

WHEREAS, A report of the Chairman of the West Virginia State Medical Association Committee on Medical Education and Hospitals was approved by the Committee at a March 23, 1975, meeting and presented to the Council of the State Medical Association; and

WHEREAS, Council did not see fit to publish this report to the membership; and

WHEREAS, The needs and costs of medical education in West Virginia are a matter of concern to West Virginians in general and of even greater concern to the medical community;

THEREFORE, BE IT RESOLVED, That the above named report be approved by this House of Delegates and published in *The West Virginia Medical Journal.*

(The Resolutions Committee reported this resolution back to the House of Delegates for action. By a secret ballot, the House voted 47-27 to accept the medical education report, and directed that it be printed in *The West Virginia Medical Journal.*)

Resolution No. 7—Workmen's Compensation Disability Evaluation—By the Section on Orthopedic Surgery.

WHEREAS, The West Virginia Workmen's Compensation Commission has no standard form for reporting a disability evaluation; and

WHEREAS, An appeal for a change in the amount of permanent disability could be more objectively

appraised if the same physical findings could be compared with the initial evaluation examination; and

WHEREAS, Such a standard reporting form should be provided for measurement of motion of the afflicted joint as described in the American Academy of Orthopedic Surgeons' manual and provide for the opposite joint motion as a comparison; and

WHEREAS, The term "permanent physical impairment" is more objective terminology than "permanent disability;" and

WHEREAS, Excellent rating systems are available in the form of the "American Academy of Orthopedic Surgeons' Manual for Evaluating Permanent Physical Impairment," in the form of the AMA "Guidelines to Evaluation of Permanent Impairment" and in the form of the Veterans' Administration "Code of Federal Regulations Title 38—Pension, Bonuses and Veterans Relief;"

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association request the Workmen's Compensation Commissioner to require a standard method of measurement of physical functions; and

BE IT FURTHER RESOLVED, That the individual examiners base their physical impairment values upon accepted guidelines; and

BE IT FURTHER RESOLVED, That the West Virginia State Medical Association urge the Workmen's Compensation Commissioner to grant permanent and partial disability awards upon the basis of physical impairment values provided by the examining physicians.

A Substitute Resolution for Resolution No. 8 from the Hancock County Medical Society; and Resolutions Nos. 9, 10 and 11 from the Monongalia County Medical Society, all dealing with support for medical schools in West Virginia.

WHEREAS, West Virginia remains in need of physicians; and

WHEREAS, a balanced and greatly strengthened program of medical education is a necessary step toward meeting this need;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association support any medical school in existence or under development if adequate funding of such institution is feasible; and

BE IT FURTHER RESOLVED, That the West Virginia State Medical Association strongly urge executive and legislative branches of state government to give serious consideration to the feasibility of a single, umbrella type of administrative structure for such medical education programs.

Resolution No. 12—Licensure of Podiatrists—From the Council.

WHEREAS, The West Virginia Code (Chapter 30, Article 11, Section 2), provides for licensure of chiropodists or podiatrists to treat by medical, mechanical or surgical means ailments of the human hand or foot; and

WHEREAS, The academic curricula of schools of chiropody or podiatry do not provide education or training in the ailments of the human hand; and

WHEREAS, The American Podiatry Association defines podiatry as the branch of the medical arts which deals with the examination, diagnosis, treatment and prevention of diseases and disorders of the human foot and this treatment may be by medical, surgical, mechanical and physical means; and

WHEREAS, Physicians performing hand surgery obtain special residency training in surgery of the hand for the protection of the patient;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association prepare and submit to the Legislature a bill to amend Chapter 30, Article 11, Section 2 of the Code to read as follows: "For the purpose of this Article, podiatry shall mean the medical, mechanical or surgical treatment of the human foot, such surgery being performed only under local anesthetic. It shall also include the fitting or recommending of appliances, devices or shoes for the correction or relief of foot ailments."

(Upon recommendation of the Resolutions Committee, the House referred this resolution to the Legislative Committee of the West Virginia State Medical Association pending further discussions by representatives of the Association and podiatrists relative to the matters involved.)

Resolution No. 13—Infringement on Hospital Medical Practice—By the Council.

WHEREAS, Recent legal opinions handed down in federal jurisdictions in West Virginia have caused concern as to the proper and reasonable rights of hospital medical staffs and hospital governing bodies; and

WHEREAS, It should be recognized that physicians practicing in hospitals are the most competent and qualified individuals to judge the skills and qualifications of members of their profession;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association strongly oppose the principle that any extraneous non-medical organization can dictate the manner in which physicians and hospitals provide patient care.

REPORT

(*Editor's Note*: The following report as developed by its Chairman, P. A. Tuckwiller, M. D., of Charleston, was considered by the Medical Association's Committee on Medical Education and Hospitals at a March 23, 1975, meeting in Charleston. After lengthy discussion, the committee members voted 10-2 to approve recommendations in the report for a comprehensive further study of West Virginia's physician needs, and for development of a long-range plan to meet such needs. The Association's Executive Committee and Council received the report at meetings on April 12 and 13, respectively, with no further action, but with Council voting that the report not be published in the *Medical Journal*. In the second and final session of the Association's House of Delegates, on August 23 and during the Association's 108th Annual Meeting in White Sulphur Springs, the House—acting on a resolution from the Kanawha Medical Society—voted 47-27 in secret balloting to accept the report and to direct its publication in the *Medical Journal*.)

MEDICAL EDUCATION:

PAST, PRESENT AND FUTURE (A NINE-YEAR REVIEW)

We should profit by experience of the past. About six decades ago, there were very many medical schools in the United States. These were investigated by the Accreditation Committee of the American Medical Association and rated as Class A and Class B. Most of the Class B schools were closed. A few were upgraded and the enrollment was increased in Class A schools; the standards for accreditation were raised. Medical education in 1910 was reviewed in the now famous Flexner Report commissioned by the Carnegie Foundation.

Many of the State University Medical Schools were not located at University Centers but instead at populous centers where many patients were available for teaching medical students, interns and residents. To cite just a few examples: Cornell University at Ithaca, New York, and its medical school in New York City; the University of Illinois at Urbana, and its medical school in Chicago; Northwestern University at Evanston, Illinois, and its medical school in Chicago; the University of Indiana in Bloomington, and the last two years of its medical school in Indianapolis.

Let me now point out the fact that, even though Huntington is the largest city in West Virginia, one seventh of the people of West Virginia live in Kanawha County, the population of which county is almost as great as that of Cabell and Ohio counties combined. The hospitals of Charleston serve medical needs of many surrounding counties. There are now over 160 physicians practicing in West Virginia who had part or all of their hospital training in the Charleston General or Memorial hospitals of Charleston, many more who trained in Ohio Valley and Wheeling hospitals and a good number who trained in Huntington hospitals before they lost their accreditation for intern and resident training programs.

When Dr. Albert Esposito was President of the West Virginia Medical Association in 1964-65, he first proposed a two-year medical school with Marshall. Our Committee on Medical Education and Hospitals studied this matter and, on February 20, 1966, passed the following resolution:

"That this Committee regards the establishment of another independent two-year medical school as unfeasible and that attention be directed instead toward expanding the present facilities of the West Virginia University School of Medicine so as to double its present enrollment and production of graduates within the next few years."

The motion carried unanimously.

It was moved by Doctor Sleeth and seconded by Doctor Esposito:

"That in order to render the highest standard of medical care to the people of West Virginia, the Committee advocates: (1) broadening the medical education of our medical students by the WVU Medical Center in cooperation with the State Medical Association by establishing supplemental instruction in the clinical years in other geographical areas in our state; (2) coordinating the improving graduate intern and resident programs; (3) providing increased postgraduate education for the practicing physicians of our State; and (4) rendering more attractive the practice opportunities for the new physicians in our State."

The motion carried unanimously.

In 1968, under the co-sponsorship of our Committee of the West Virginia Medical Association and the West Virginia University Medical Center, the West Virginia Joint Council on Teaching Hospitals was formed with two of the main goals to be the strengthening of the residency training programs at the larger hospitals throughout the state and for teaching clinical experience for third- and fourth-year students from the West Virginia University School of Medicine. The first meeting was held March 13, 1969. The hospitals of Wheeling, Charleston, Clarksburg, Beckley and Martinsburg have cooperated with this effort. Cabell has one or two residents in pathology and is planning a family practice residency program. Had the hospitals of Huntington maintained their intern and residency programs, it would be safe to estimate we would have at least 40 to 50 more practicing physicians in West Virginia at this time. Let me remind you here that just as the University Hospital renders good medical care to residents of southwestern Pennsylvania, the fine doctors of Huntington serve many patients from Ohio and Kentucky. This further minimizes the availability of medical care to West Virginia citizens with our relative shortage of physicians.

From several individuals scattered throughout the State, we have heard criticisms of the West

Virginia University School of Medicine. Some may be justified, but many are very unreasonable. We physicians in Charleston have been greatly impressed with the basic knowledge and excellent performance of the senior medical students, the interns and residents who have graduated from West Virginia University. It is my firm conviction that the West Virginia University School of Medicine is very good indeed and might even be rated as excellent if it had better financial support.

Many years ago, when I had a course in logic in the University, I learned that no proper solution of a problem could result when one starts with a false premise. The premise that the way to get more physicians practicing in any state is to have more medical schools is false. Experience the country over has shown that the most important determining factors in getting more physicians are chiefly twofold: (1) Better hospital training programs; and (2) Improving educational, cultural, economic and political environment of our communities and the State as a whole. There are at present eight states in our country which have no four-year medical school and which have more practicing physicians per capita population than West Virginia. For example, New Jersey (which now has two medical schools) had more physicians in proportion to population before the medical schools opened. They do have several hospital residency programs.

In the last 10 years, about 25 new medical schools have opened their doors in the United States (a total now of 114), and many others have increased their enrollment (a total in September, 1974, of 14,763 first-year students). Many good medical educators have estimated that by 1980, the supply of physicians will have increased sufficiently to meet the demand. It will be after 1980 before any graduate of Marshall University could be practicing in West Virginia.

The Greenbrier School of Osteopathic Medicine, with a faculty of six, the majority of whom are part-time from the faculties of surrounding small colleges, has now received financial support from the Legislature. In my opinion this is asinine for a school in a sparsely populated area, which is doomed to mediocrity, to say the least . . .

Ben L. Morton, Chancellor of the State Board of Regents, hired a consultant because the Board, in his words, was "trying to get dispassionate help from somebody to assist us here." The study was done by Dr. George L. Smith, Dean of the School of Medical Sciences at the University of Nevada. His report states:

"The West Virginia University Medical School has a lower salary scale for its physicians and faculty than the U. S. average. The turnover of faculty is high and salary levels are probably partially responsible for it. The Governor's budget reflects an increased appropriation of only $400,000 in personal services, which will not allow for cost-of-living increases and the further development of programs in Charleston and Wheeling. Additional funds are needed for the school to carry out its present assigned mission. This is to conduct the present teaching program and to develop the centers in Charleston and Wheeling."

Doctor Smith seriously questioned the need for the Greenbrier School of Osteopathic Medicine. "If it can be shown that such a need exists for osteopathic medicine," he said, "then the idea of contracting the clinical years to other osteopathic schools in the United States seems to be a wise choice."

Smith submitted these recommendations to the Board of Regents:

"Give prompt attention to the restoration of West Virginia University's School of Medicine budget during this legislative session."

"Give high priority to projected development of adequate financing for the University's medical school."

"Add to the Regents' staff a physician-educator capable of developing adequate future projections for medical education."

"Add to the Regents' staff individuals who can coordinate and develop a state plan for nursing and allied health education."

It seems to me to be logical reasoning that Basic Science training in the first two years of medical school would be more feasible economically for two sections of 60 students each in one school with clinical training of the last two years spread between several hospital training centers throughout the State than to have 80 students at Morgantown and 40 students at Huntington. The reason I state two sections of 60 each is because the laboratories for anatomy, physiology and chemistry were originally constructed for a projected class of 60 students. The increased size to 120 students could be accomplished with about 25 per cent increased faculty cost—much less than the cost of an entirely separate basic science faculty.

For the past three years, I have felt that our committee should take a definite stand on a policy of medical care and medical education to be approved by the Council of the State Medical Association and released to the public, especially the political leaders and Legislature, for guidance in wise legislation (even though this may not have altered the course of events). Each year, the current President of the State Association has strongly advised me not to do this until 1973, when Dr. A. Thomas McCoy suggested I call such a meeting.

In the call for this meeting to be held Saturday, November 3, 1973, a part of the resolution passed in 1966 was quoted. It was my feeling that the time was past due to update, either pro or con, our original policy for action, to be followed by a meeting of the State Council the following day. This resulted in quite a furor in the Cabell County Medical Society, with a subsequent chastisement of

Dr. A. Thomas McCoy and myself. In turn, the meetings of our committee and the State Council were cancelled.

However, meetings were called again November 18, 1973. We were willing to hear from the Cabell Society their evidence that a Veterans Administration-Marshall Medical School would be very inexpensive for the taxpayers of West Virginia. The Huntington delegation agreed to come provided we would promise to make no motions, resolutions or recommendations in regard to the proposed new school. Very foolishly, I agreed to this stipulation. It seems to me to be a sad day when one County Medical Society and our State's leading politicians can silence an entire state association and its one committee which has studied the problems of medical education for nine years. Instead of evidence for good financial backing, our committee was deluged with endorsements by several labor unions, the American Legion, veterans' organizations, etc. Doctor (Worthy W.) McKinney, the Chairman, meanwhile, had again cancelled the Council Meeting to follow.

It was not until January 20, 1974, that at a meeting of the State Council the following resolution (offered on behalf of the Kanawha Medical Society—*Editors*) was passed:

"WHEREAS, the Council of the West Virginia State Medical Association represents the majority opinion of the membership of the Association; and

WHEREAS, the membership endorses the effort to increase the number of qualified physicians practicing in West Virginia; and

WHEREAS, the West Virginia State Medical Association has been requested to voice an opinion regarding the feasibility of a second medical school under the sponsorship of the Veterans Administration and Marshall University; and

WHEREAS, the Committee on Medical Education and Hospitals has studied the problem over a nine-year period and recommended the enlargement of our present West Virginia University School of Medicine with clinical training of third- and fourth-year medical students at well qualified teaching hospitals throughout the State; and

WHEREAS, surveys have shown that there is no direct ratio between the number of medical school graduates and the number of practicing physicians in any one state; and

WHEREAS, the two most important factors are the number of good residency training programs and the climatic, cultural, education and economic opportunities offered by a community; considerable progress is being made in these directions; and

WHEREAS, proponents for the second medical school as yet have not presented sufficient evidence to insure the future financial success without considerable tax burden to the State of West Virginia and jeopardizing the financial security of our present medical center and the affiliated teaching centers;

THEREFORE, BE IT RESOLVED, that the Council of the West Virginia State Medical Association withhold endorsement of any additional medical school for West Virginia at this time."

Again, due to overwhelming political pressure, a special meeting of Council was called a week later, January 27, 1974. On this date, the Council approved this resolution:

"Following further consideration at a meeting held in Charleston on Sunday, January 27, 1974, the West Virginia State Medical Association supports the *continued study of the feasibility* of the proposed establishment of a medical school in West Virginia in conjunction with the Veterans Administration and Marshall University complex since this would offer an opportunity for the training of more West Virginia students for a career in medicine.

"Also, the Council encourages the physicians of Cabell County to continue to put together facts for dissemination to the Association, its members and to the public. This statement represents the official policy of the Association as of this date."

This endorsement of the "continued study of the feasibility" I do not consider an endorsement of the proposed Marshall University Medical School . . .

In the United States there is one medical school for every 1.8 million people—this makes our State, with one school, almost exactly on the average.

According to the Directory of American Medical Education, 1972-73, edited by the Association of American Medical Colleges, there are only 15 states having more than one medical school which are state tax supported. All of these have very much larger populations than that of West Virginia. For example, our neighboring state of Pennsylvania has three.

It is my firm conviction that if the State Legislature had combined these appropriations to upgrade our one medical school and financially support the hospitals' residency training programs throughout the State, including Huntington, we would be well under way toward the training and recruitment of the sorely needed physicians for West Virginia. But now our efforts and available funding will be fragmented between Morgantown, Huntington and Lewisburg!

It seems that the politicians and labor unions have more input into planning medical education than do the physicians of our State.

Quoting in part from an editorial in the *Charleston Daily Mail* of March 14, 1975:

"It was not exactly on thoughtful considerations of merit and demerit that these appropriations sailed through the Legislature. They succeeded because log-rolling is almost the synonym for the legislative process and the way the game is played. Back-scratching is a variation. You scratch my back and I'll scratch yours; and we'll scratch theirs and they'll scratch ours. In the exchange, there will

be something for everybody; and the legislature can head for home confident that in the accommodation of these semi-private and parochial interests the public good has been served. This game in which everyone is bound to win something is also the formula for everyone's loss."

We of the Committee on Medical Education and Hospitals have a clear obligation. Therefore, I have this proposal to make:

We should petition the West Virginia Board of Regents to ask the Joint Commission on Accreditation of Hospitals, along with the Association of American Medical Colleges, to appoint a committee of medical educators to:

1. Study West Virginia's need for physicians for the present and future.

2. Review our present and proposed facilities for medical education.

3. Outline a plan to follow over the next 10 years that would allow us to increase the number of students to a point where West Virginia's need for physicians would be satisfied. This should apply not only to a medical school or schools, but also to the development of quality residency training programs which *will also need state aid.*

4. The Provost for Health Sciences of West Virginia University School of Medicine, the Dean of the West Virginia University School of Medicine, the Dean of the Charleston Division of the West Virginia University Medical Center, the Dean of the proposed Marshall University Medical School, and the Dean of the Greenbrier School of Osteopathic Medicine should be asked to accept the report and to abide by the decisions insofar as State aid for their respective programs is concerned.

5. A time limit for the total report should be reasonable, e.g., six months. Similar studies have been done for other states and could be used as models.

I personally feel that our committee and the West Virginia State Medical Association have done an injustice to our own physicians and the people of West Virginia. So disappointed am I in our State Association, especially the officers and State Council, and also in my failure to press forward in our program, that I hereby resign as Chairman of the Committee on Medical Education and Hospitals (although I would be honored to remain as a member of the committee). In so doing, I am quite anxious to keep the record straight; hence this detailed final report. If the majority of the committee agrees with the opinions I have expressed, I would greatly appreciate their endorsement of this committee report to forward to our State Council and for publication in *The West Virginia Medical Journal.* If you do not agree, so be it—all the more reason I should step aside.

Pat A. Tuckwiller, M. D.
Chairman

March 23, 1975

Necrology Report

The following is a list of West Virginia physicians whose deaths have been reported to the West Virginia State Medical Association during the past year:

1974

Aug. 13	Richard B. Sheridan	Vienna
Aug. 25	Austin A. Provins	Key Biscayne, Florida
Sept. 8	George E. Strobel	Wheeling
Sept. 16	Julius L. Berkley	Charleston
Sept. 18	Edward B. Holmes	Parkersburg
Oct. 1	Richard W. Corbitt	Parkersburg
Oct. 6	Gerald E. Hartle	Philippi
Oct. 19	Don V. Hatton	Williamson
Oct. 22	George E. Snider	Bluefield
Oct. 24	O. L. Hudkins	Weston
Nov. 2	Joseph E. Martin, Jr.	Elkins
Nov. 6	James H. Wolverton	Piedmont
Nov. 16	James M. De Pue	Charleston
Nov. 25	Dwight M. Hoke	Beckley
Dec. 5	James P. Jones	Pennsboro
Dec. 25	Clarence F. Morrison	Weston

1975

Jan. 3	Janet R. Strader	Morgantown
Jan. 30	Segundo C. Iturriaga	Montgomery
Feb. 4	Abraham Tow	Logan
Feb. 13	Bruce H. Pollock	Naples, Florida
Feb. 18	James Park McMullen	Wellsburg
Feb. 18	Herbert E. Sloan, Sr.	Clarksburg
Mar. 7	Bong Sook K. Lee	So. Charleston
Mar. 8	Richard W. McGan	Princeton
Mar. 9	Wilson P. Smith	Huntington
Mar. 19	Bedford F. Puckett	Oak Hill
Apr. 15	D. Keith Auvil	Parkersburg
Apr. 26	James D. Brown	Romney
May 27	Emmet D. Moyers	Harrisville
June 3	Edward Nicholas Morgan	Huntington
June 22	Edna Virginia Justice	Ashland, Kentucky
July 1	Boyd F. Brown	Huntington
July 11	E. V. Jordan	Charleston
July 25	E. W. McCauley	Bluefield
July 27	G. G. Irwin	Charleston
Aug. 8	Margueritte E. J. Kersey	Peterstown

Respectfully submitted,

Charles R. Lewis,
Executive Secretary

August 18, 1975

23rd Annual Medical Seminar Scheduled In Bluefield

The 23rd Annual Medical Seminar of the Bluefield (W. Va.) Clinic, Stevens Clinic (Welch), and the Clinch Valley Clinic (Richlands, Virginia) will be held on October 9 in Bluefield. The seminar will begin at 1 P. M. at the Bluefield Country Club. Scientific topics will include "Principles of Fluid and Electrolyte Therapy," "An Essay on Breast Cancer," "Medical Management of Rheumatoid Arthritis," and "Management of Peptic Disease."

CLASSIFIED

EMERGENCY ROOM PHYSICIAN—Immediate opening for an emergency room physician to join a young, progressive E. R. group in Southern West Virginia. Individual would join R. M. Cyphers, M. D. (West Virginia University Medical School, class of '72), at a 172-bed community hospital located in Princeton. Guaranteed income and excellent working conditions are available. Please contact Bill Clark, Assistant Administrator, Princeton Community Hospital, Princeton, West Virginia 24740, or call collect (304) 425-2434.

WANTED—Young physicians for a growing town with industry, a college and a good place to live. Town of 7,000, rural setting, pleasant surroundings, accessible to recreation. Openings for several family practitioners and one internist. Must like to help people and be willing to work. Contact Dr. Joseph B. Reed, M. D., 93 W. Main Street, Buckhannon, West Virginia 26201. Phone (304) 472-6041.

EMERGENCY ROOM PHYSICIAN—Wanted for 200-bed general hospital in beautiful mountain area; immediate opening; attractive working hours. Possibility of becoming member of well established group; excellent opportunity for general physician who wants to work regular hours. Give details of training and present position on first inquiry. Immigrant visa and permanent ECFMG Certificate required for foreign graduates. Address inquiries to J. N. Vallandingham, Bluefield Sanitarium, Bluefield, W. Va. 24701.

WANTED—Mountaineer Family Health Plan, a model pre-paid primary care program needs a board certified or eligible internist, pediatrician, and a family practitioner for patient care, consultation and teaching. Facilities include primary care center adjacent to 221-bed hospital with fully staffed emergency room and three rural satellite clinics in beautiful Southern West Virginia mountains. Excellent salary plus fringe benefits. Call or write John Betinis, M. D., Box 1149, Beckley, West Virginia 25801; Telephone (304) 252-8551.

SURGICAL RESIDENCY AVAILABLE: Large metropolitan hospital, fully accredited for residency training. Contact Bert Bradford, Jr., M. D., Director of Surgery, Charleston Area Medical Center, 3200 MacCorkle Avenue, S. E., Charleston, W. Va. 25304.

NEEDED—Family physicians for solo or group affiliation in Southeastern W. Va. county seat. Population of 5,000 and more than 8,000 in secondary population area. Immediate access to 40-bed county hospital. Guarantee negotiated directly with hospital; excellent recreational facilities and schools; and organized group clinic under development. Call Mr. Thomas E. Heffernan collect at (304) 799-4193.

EMERGENCY ROOM PHYSICIAN—Fully accredited 260-bed general hospital in the center of the Mid-Ohio Valley at Parkersburg, W. Va. Contact R. C. Cowan, Jr., M. D. Telephone 428-8011.

WANTED—Emergency room physician in a teaching hospital. May develop any weak areas if you desire. Permanent position in a city of 25,000. Safe friendly area to live and bring up children. Annuity negotiable—based on academic and practical background. Send curriculum vitae before calling. Contact James J. Mathews, M. D., Director, Emergency and Ambulatory Care, Beckley Appalachian Regional Hospital, Beckley, W. Va. 25801. Phone: (304) 255-3000.

FOR LEASE—Established Medical practice with fully equipped office. Includes X-ray, fluoroscope, spirometer, EKG, small lab., IPPB therapy. Dictating equipment. Trained personnel available. Retiring soon. Contact Charles F. Dent, M. D., 309 Cobun Ave., Morgantown, W. Va. 26505. Telephone (304) 296-4384 or 599-2395.

WANTED—A physician to serve the area of Pennsboro in Ritchie County. A building to accommodate two physicians and one dentist has been completed. Citizens of Pennsboro guarantee that the physician will receive cordial reception and the area offers a wonderful opportunity for a young, ambitious physician. If interested, contact Mrs. J. Carl Rinehart, Pennsboro, W. Va.

PHYSICIAN WANTED—An experienced practitioner to add to and work with an established group in Charleston. Excellent working conditions with regular hours and minimal night work. Liberal vacation, sick leave and holiday program. Pension plan, Social Security, and professional liability insurance coverage. Apply Charles E. Staats, M. D., 123 West Washington Street, Charleston, W. Va. 25302—Telephone 346-0381 Area Code 304.

WANTED—Internist and pediatrician urgently needed in a growing northeastern West Virginia community; drawing area is approximately 23,000; modern hospital with excellent facilities; office space available; guaranteed annual income; centrally located for vast recreational facilities. Write RLH, The West Virginia Medical Journal, P. O. Box 1031, Charleston, W. Va. 25324.

WANTED—A physician to take over the practice of an established physician in the community of Middlebourne and surrounding area of West Virginia. A fine opportunity with unlimited potential for an ambitious practitioner. Citizens in the area will do everything possible to help a new physician. Contact Mr. Philip B. Stealey, Secretary, Middlebourne Lions Club, Middlebourne, W. Va. 26149.

EMERGENCY ROOM PHYSICIAN—Accredited 280-bed progressive general hospital expanding to 360 beds including new emergency facilities. Excellent income and working conditions. Send resume to Assistant Administrator, Cabell Huntington Hospital, 1340 Sixteenth Street, Huntington, West Virginia 25701.

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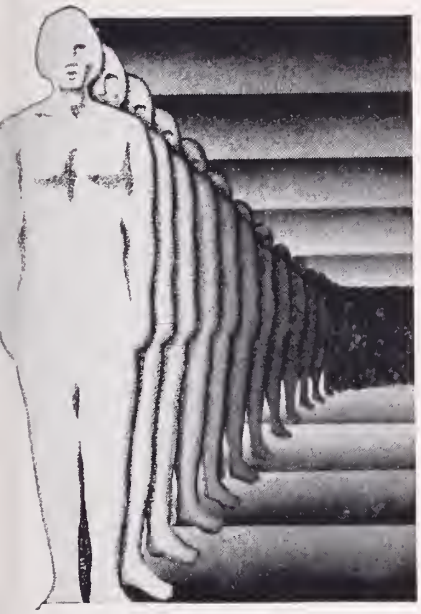

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 to 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
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IN PAINFUL ACUTE CYSTITIS*

*nonobstructed; due to susceptible organisms

RELIEVE THE PAIN

WHILE YOU ELIMINATE THE PATHOGENS.

FOR THE PAIN

☐ **Early relief of painful symptoms** such as burning and pain associated with urgency and frequency.

FOR THE PATHOGENS

☐ **Effective control of susceptible pathogens** such as *E. coli, Klebsiella-Aerobacter, Staph. aureus, Proteus mirabilis* and, less frequently, *Proteus vulgaris*.

Appropriate antibacterial therapy: Up to 3 days therapy with Azo Gantrisin 4 to 6 tablets *Stat.*, then 2 tablets *q.i.d.*; then 11 days with Gantrisin (sulfisoxazole) may be considered.

AZO GANTRISIN®

(50 mg phenazopyridine HCl and 0.5 Gm sulfisoxazole)

Before prescribing, please consult complete product information, a summary of which follows.

Indications: In adults, urinary tract infections complicated by pain (primarily cystitis, pyelitis and pyelonephritis) due to susceptible organisms (usually *E. coli, Klebsiella-Aerobacter, Staphylococcus aureus, Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) in the absence of obstructive uropathy or foreign bodies.

Important Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media for patients already taking sulfonamides. Increasing frequency of resistant organisms currently is a limitation of the usefulness of antibacterial agents including the sulfonamides. Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 12 to 15 mg/100 ml is considered optimal for serious infections; 20 mg/100 ml should be the maximum total sulfonamide level, as adverse reactions occur more frequently above this level.

Contraindications: Children below age 12; sulfonamide hypersensitivity; pregnancy at term and during nursing period. Contraindicated in glomerulonephritis, severe hepatitis, uremia, and pyelonephritis of pregnancy with gastrointestinal disturbances, because of phenazopyridine HCl component.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; clinical signs such as sore throat, fever, pallor, purpura or jaundice may be early indications of serious blood disorders. Complete blood counts and urinalysis with careful microscopic examination should be performed frequently during sulfonamide therapy.

Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

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71 No. 11

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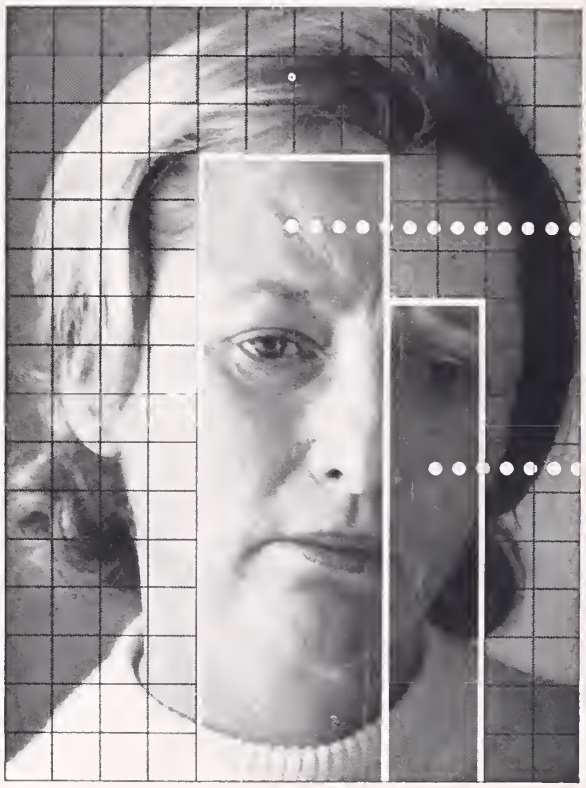

Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase i and/or severity of grand mal s require increased dosage of st convulsant medication; abrupt may be associated with tempo crease in frequency and/or se seizures. Advise against simult gestion of alcohol and other C sants. Withdrawal symptoms (those with barbiturates and alc occurred following abrupt disc (convulsions, tremor, abdomir cle cramps, vomiting and swea addiction-prone indlviduals un

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in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

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in psychoneurotic
anxiety states
with associated
depressive symptoms

because of their predisposi-
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actation or women of child-
weigh potential benefit
ible hazard.
: If combined with other psy-
r anticonvulsants, consider
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erely depressed, or with latent
or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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NOVEMBER
1975

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Official Organ of the West Virginia State Medical Assaciatian

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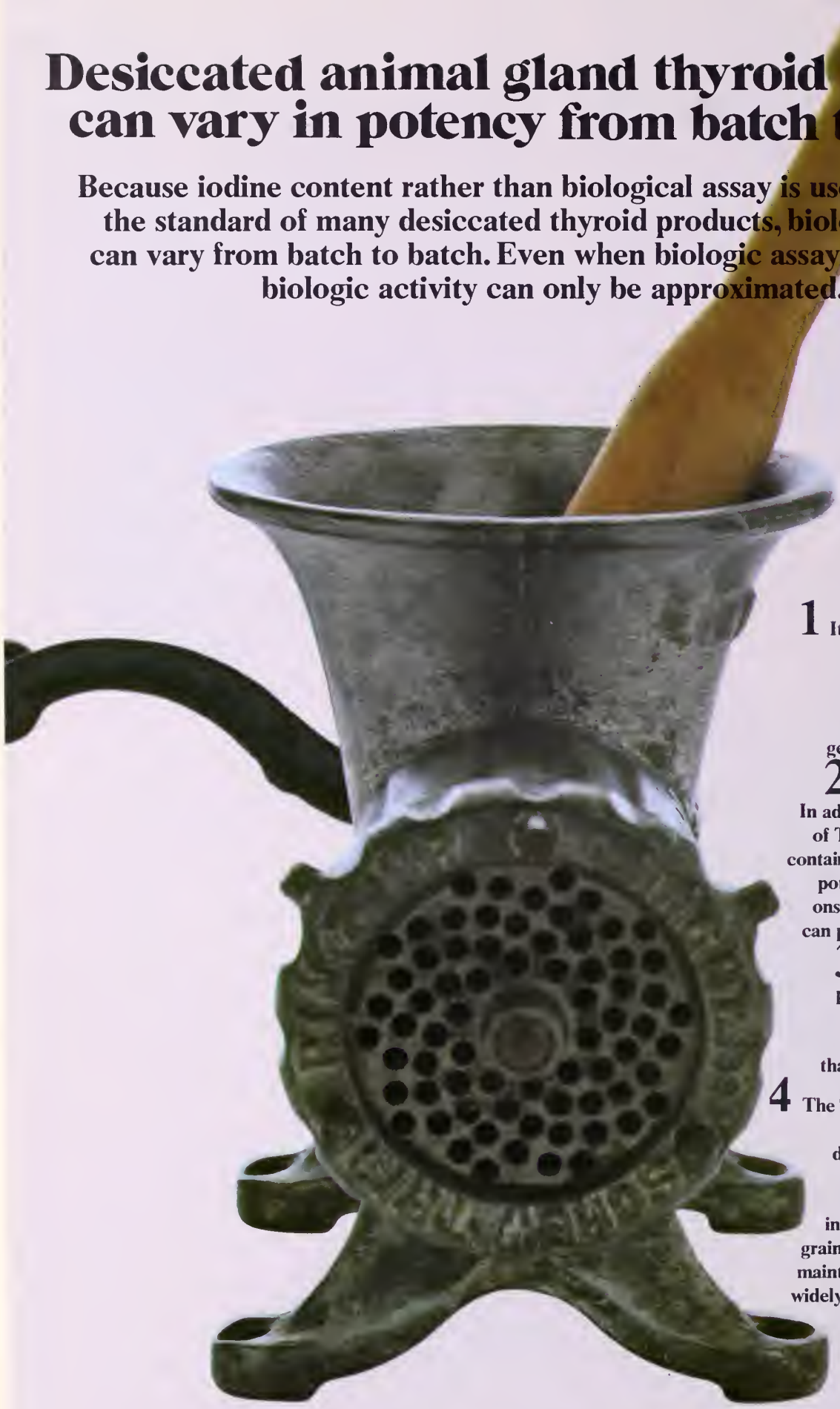

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1. Armour Thyroid (Tablets). 1975 Physicians' Desk Reference, p. 561.
2. Proloid® (thyroglobulin). 1975 Physicians' Desk Reference, p. 1575.

Every batch of Synthroid® T_4 is of controlled potency. (sodium levothyroxine, U.S.P.) FLINT

SYNTHROID is T_4. It provides your patients with everything they need for complete thyroid replacement therapy.

1 Sodium levothyroxine is *not derived* from any animal gland source. It is a synthetic and, since sodium levothyroxine is the only active ingredient, its weight is the sole determinate of potency.

2 SYNTHROID (sodium levothyroxine) is T_4 which is converted by the patient to T_3 at the cellular level, thereby providing a physiologic source and amount of T_3 to meet metabolic needs for complete thyroid replacement therapy. Because the onset of effect is slower and more steady, the possibility of sudden metabolic surges is reduced with SYNTHROID therapy.

3 SYNTHROID (sodium levothyroxine) products have a longer and more reliable shelf life than Thyroid U.S.P. when kept under the same proper storage conditions. There is no animal protein present in SYNTHROID products.

4 A recent study of 44 patients with hypothyroidism indicates that 89 percent of the patients were maintained with doses of L-thyroxine (SYNTHROID) between 100 mcg. and 200 mcg. (0.1 mg. and 0.2 mg.) per day.[3]

3. Stock, J.M., Surks, M.I., and Oppenheimer, J.H.: Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. *290*:529-33, 1974.

Eliminates many of the uncertainties of desiccated thyroid therapy.

Synthroid®

(sodium levothyroxine, U.S.P.) FLINT

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

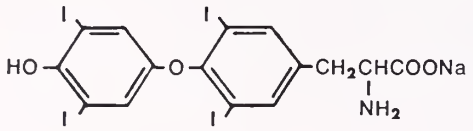
See reverse side for full prescribing information.

Synthroid®
(sodium levothyroxine, U.S.P.*) FLINT

Synthroid Tablets—for oral administration
Synthroid for Injection—for parenteral administration

Description

SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine). L-thyroxine is the principal hormone secreted by the normal thyroid gland.



Sodium Levothyroxine

Actions

SYNTHROID (sodium levothyroxine) **Tablets,** taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications

SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications

There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings

Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions

Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions

Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration

For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occurs and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How supplied

SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—violet . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green. Depending on strength, these tablets are available in bottles of 100, 500, 1000 and 5000.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution

Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

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Deerfield, Illinois 60015

*U.S. Pat. 2,889,363

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There's something special about children vomi

The risk of dehydration . . . plus the psycholog
stress on both mother and child . . .
greatly increases the urgency in controlling vo
in children. In addition, there is, of course, nee
avoid the extrapyramidal problems associated
phenothiazine medications.

ıt's why special medication is preferred

® CHILDREN SUPPRETTES™ are specially ıted to stop vomiting and nausea in children— and with minimal complications.

NS are administered rectally—often the best ı the vomiting patient.

exclusive WANS formula provides both ıine maleate and sodium pentobarbital for eness . . . contains no phenothiazines or local etics.

unique Supprette delivery system rapidly s effective levels of medication . . . with no fatty acids to affect absorption or cause local ɔn.

NS SUPPRETTES require no refrigeration . . . ication other than water . . . and dissolve tely, with virtually no leakage.

children over 12 years of age and adults ıg from nausea and vomiting, consider higher- h WANS® No. 1 or WANS® No. 2.

A special favorite* of West Virginia physicians in controlling childhood vomiting

WANS® CHILDREN SUPPRETTES™

rectal antinauseant/antiemetic

pyrilamine maleate 25 mg; sodium pentobarbital 30 mg
Warning: may be habit forming

*Based on usage by dosage form; data gathered by independent research organization.

PTION: WANS® Children: (Blue) pyrilamine maleate nd pentobarbital sodium* ½ gr (30 mg) scored for ge. WANS® No. 1: (Pink) pyrilamine maleate 50 mg tobarbital sodium* ¾ gr (50 mg) scored for ½ dosage. No. 2: (Yellow) pyrilamine maleate 50 mg and rbital sodium* 1½ gr (100 mg) scored for ½ dosage.

ING: may be habit forming.

AINDICATIONS: Infants under 6 months. Acute tent porphyria, known hypersensitivity to barbiturates stamines, known previous barbiturate addiction, ıepatic impairment, CNS injury, senility, and presence ıtrolled pain.

NGS: Barbiturates may be habit forming. Pre-existing ɔgic disturbances may be aggravated. Idiosyncratic s may occur. Acquired sensitivity may result in allergic s. Safety in pregnancy has not been established.

UTIONS: Use cautiously with other sedative, hypnotic tic agents. Use with caution in patients with acute or hepatic disease, fever, hyperthyroidism, diabetes , severe anemia, congestive heart failure, or a history dependence or suicidal tendencies. May impair s and coordination with increased accident risk.

ADVERSE REACTIONS: Drowsiness, fatigue, vertigo, incoordination, tremor, muscle weakness, ataxia, hypotension, respiratory depression, delirium and coma. Dryness of nose, mouth, and throat, pupillary dilatation or blurred vision, urinary retention, abdominal pain, nausea, vomiting, diarrhea, and hypersensitivity reactions. Overdose may result in hallucinations, excitement, ataxia, incoordination, athetosis, convulsions, and death.

DOSAGE AND ADMINISTRATION: Rectally, children 2-12 years of age, one WANS® CHILDREN every 6-8 hours as required. Children under 2 years of age may receive ½ the above dosage. *Adults:* Rectally, one WANS® No.1 Supprette™ to inhibit mild nausea and/or vomiting; one WANS® No. 2 Supprette to control pernicious vomiting. Repeat doses for adults should be 4 to 6 hours apart, not to exceed four doses in 24 hours. Moisten finger and Supprette with water before inserting. Optimum dosage must be determined in each case by the clinical response.

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Alcon Laboratories, Inc.
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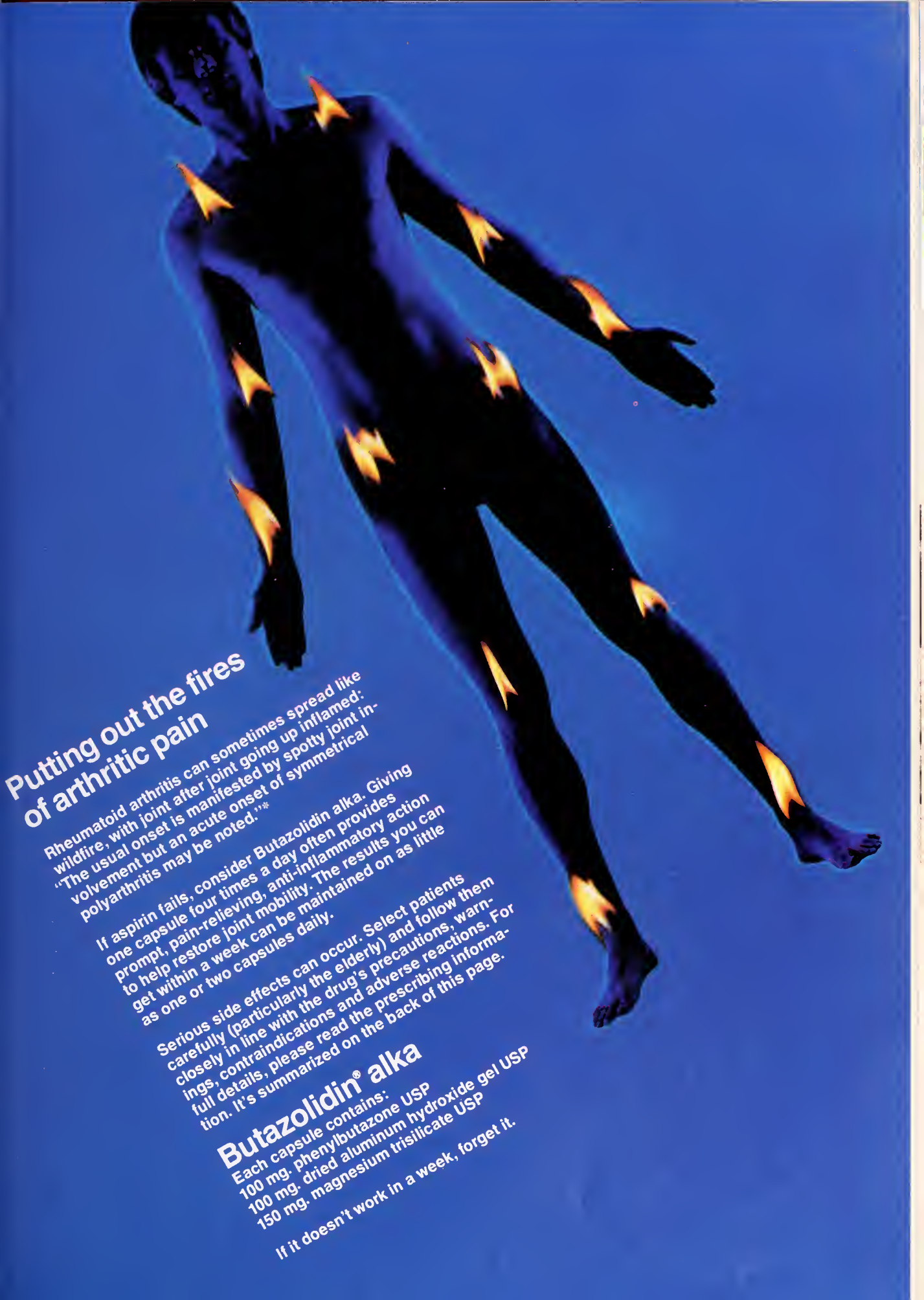
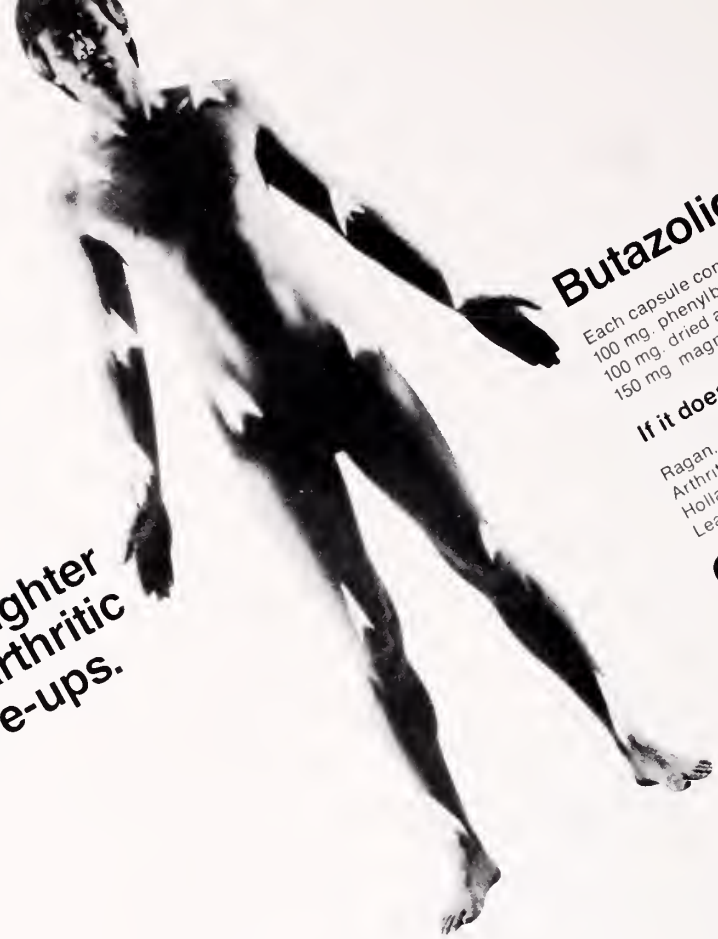
NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.


Putting out the fires of arthritic pain
Rheumatoid arthritis can sometimes spread like wildfire, with joint after joint going up inflamed: "The usual onset is manifested by spotty joint involvement but an acute onset of symmetrical polyarthritis may be noted."*
If aspirin fails, consider Butazolidin alka. Giving one capsule four times a day often provides prompt, pain-relieving, anti-inflammatory action to help restore joint mobility. The results you can get within a week can be maintained on as little as one or two capsules daily.
Serious side effects can occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions. For full details, please read the prescribing information. It's summarized on the back of this page.
Butazolidin® alka
Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP
If it doesn't work in a week, forget it.



Butazolidin® alka

Each capsule contains:
100 mg. phenylbutazone USP
100 mg. dried aluminum hydroxide gel USP
150 mg. magnesium trisilicate USP

If it doesn't work in a week, forget it.

Ragan, C. The Clinical Picture of Rheumatoid Arthritis, in Arthritis, ed. 8, edited by J. L. Hollander and D. J. McCarty, Jr., Philadelphia, Lea & Febiger, 1972, chap. 21, p. 335.

Geigy

Fire fighter for arthritic flare-ups.

Important Note This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Substitute alka capsules for tablets if dyspeptic symptoms occur. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia), dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Rheumatoid arthritis, osteoarthritis, bursitis, acute gouty arthritis and rheumatoid spondylitis.

Contraindications: Children 14 years or less, senile patients, history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia, history or presence of drug allergy, blood dyscrasias, renal, hepatic or cardiac dysfunction, hypertension, thyroid disease, systemic edema, stomatitis and salivary gland enlargement due to the drug, polymyalgia rheumatica and temporal arteritis, patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existance of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals. Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight, complete weekly (especially for the aging) or an every two week blood check, pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug, its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angiitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement.

(B)98-146-070-J (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

BU 10259

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23261

"For when was honey ever made with one bee in the hive"...

Thomas Hood, *The Last Man*

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DYAZIDE®

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Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

Warning
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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Hospital Associated Infections In Surgical Patients

Jack L. Le Frock, M. D., and Albert S. Klainer, M. D.

Infections after surgery are less common now than in the past but they are as difficult to treat. Elective procedures in uncontaminated areas of the body are rarely complicated and the incidence of postoperative infection has significantly been lowered even when contamination in unavoidable. Most impressive has been the reduction in the number of infections that have complicated bowel surgery. The combined incidence of wound leakage, abscesses, and peritonitis was reduced from 30 to 40 per cent in the 1920's to a level of five to 10 per cent by the late 1930's (before sulfonamides were introduced) and to slightly lower levels since then. Clean surgery is rarely complicated at present unless the procedure is complex and prolonged as in replacement of cardiac valves, or when the patient's defense mechanisms have been ablated as in organ transplantation. The factors involved in producing infections in these patients are also responsible for them in others with fewer deficiencies.

The origin of these infections is better understood now than in the past and, with this understanding, it is possible to avoid some and to treat others. I should like to discuss the issue of infection acquired in the hopitalized patient from the point of view of its source, and from this position, discuss its prevention, recognition and treatment.

Sources of Infection

The bacteria that cause infections come from a number of places.

Attending Personnel. The first, and most readily controlled of these, is the skin or the nasal secretions of attending personnel. Contact alone, therefore, may be the cause of postoperative complications due to Group A streptococci and *Staphylococcus aureus.* In most cases it is easy to recognize the carrier of these bacteria and to prevent even the overt carrier from disseminating infection by forcing attention to such procedures as washing the hands, using sterile gloves and wearing masks that cover the nose. The development of infection due to either of these organisms requires that people in immediate contact be studied to find the conveyer. While this is not done routinely for sporadic infection, it is if two or three cases are infected within the space of a few days. Group A streptococcal complications are uncommon; S. *aureus* still accounts for half of all infections that follow surgery, but is due in most cases to organisms within or on the patient himself as shall be discussed later.

The Authors

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Objects of Contact. The hospital is as important as the people within it as a source of bacteria that lead to infection of patients. The things in the hospital that contain bacteria are IV solutions, blood, flower vases, some bath oils and creams, plaster for casts, barium for x-rays, humidifiers and countless other devices. It was once popular to blame staphylococcal infection on contact with linen, i.e., cotton sheets and the like, and great efforts were made to insure the pristine condition of the sheets, blankets, towels, floors, and bedside carafes because of the fear that if colonized with S. *aureus* devastating infection would occur. There is no evidence that this is true. Colony counts of S. *aureus* on the floor of operating rooms, patients' rooms, shelves, walls, and doors have not revealed that the recovered bacteria were anything but derivative.

There is no doubt, however, that nosocomial infections follow (1) infusions with contaminated fluids and blood, (2) prolonged intravenous cannulation whether for alimentation or simple hydration, and (3) ventilation with water vapors containing bacteria. A significant number of infections are introduced via intravenous catheters and prosthetic devices. *S. epidermidis*, for example, is the most common cause of cardiac infection following prosthetic valve implacement. It is a common skin organism and can enter the circulation via the conduit of an I.V. needle. It is also found in the open portion of the three-way stop cocks present in the central venous pressure lines.

The Patient. A third major source of bacteria that causes many infections is the patient himself. These are the normal flora of the skin, upper respiratory tract, and bowel, especially the abnormal flora that flourish as a consequence of antibiotic use. Bacteria are also derived from existing, if relatively inapparent, infection of the skin, respiratory and urinary tracts. Antibiotics used to treat or to prevent infection always eliminate sensitive bacteria in proportion to the dosage and the length of time they are administered.

Impressive documentation of a problem of antibiotic prophylaxis was published by Hill, Altemeier and Hummel in their paper, "Iatrogenic Staphylococcal Enterocolitis." They found that the use of neomycin before bowel surgery resulted in an increase in the number of *S. aureus* in the stool and a concommitant increase in the number of infections due to these bacteria. This had been reported earlier by Gaylor and others, who carried out a prospective, randomized double blind study of methods of preoperative preparation before resection of the colon. Both kanamycin and neomycin were associated with a greater number of infections than mechanical cleansing of the bowel alone; and, in addition, only those treated in the preoperative period had staphylococci in significant number in the stool following surgery. The point these and other authors have made is that oral antibiotic administration for a period of more than 24 hours creates such a change in the normal bowel bacteria that replacement by others is inevitable. There is a corollary to this: brief oral antibiotic usage can reduce the normal bacterial population without establishing a new predominant bacterial or fungal flora.

Infections that develop in the patient who has received antibiotics are harder to treat than those occurring in the untreated patient. They are due to resistant bacteria and often to strains that are difficult to isolate on culture. Antibiotics given for prophylactic purposes are, therefore, capable of increasing the patient's risk. Antibiotics used in the treatment of infection can also produce other problems. Appendiceal abscesses, for example, require adequate surgical drainage first and adequate antibiotic treatment second. When drainage has been incomplete or when drug use has been inadequate or incorrectly chosen, the abscess returns or is associated with collateral abscess formation in adjacent areas. The same organism is occasionally responsible for both the original infection and for the complication, but often a different one is the cause and must be treated with a totally different drug. It is generally in this setting that *Bacteroides* or *Pseudomonas* are encountered as pathogens. The value of cultural identification of the first causative agent is obvious; the necessity of following the effect of antibiotic therapy by obtaining cultures while the patient is being treated needs emphasis. The forewarned physician, though he may not be able to prevent a complication, can always deal with it swiftly and effectively. The patient who has undergone antibiotic treatment for infection as well as the one who has received drugs in prophylaxis will always exhibit a changed, residual bacterial population. Knowledge of the change will make it possible to treat complications with confidence.

The patient becomes the source of bacteria that causes complicating infection for other reasons than antibiotic exposure. Changes in the bacterial population of the throat and the bowel are associated with nothing more than hospital residence. Le Frock, Ellis, and Weinstein at the New England Medical Center Hospital enumerated the aerobic fecal and oropharyngeal flora of 75 patients in the hospital who were not given antibiotics, 70 patients who were treated and 25 controls who were not hospitalized. All had normal throat flora at the beginning. At the end of 21 days, there was no change in the throat flora of the control group, but gram-negative bacteria predominated in the pharynx of 17 (23 per cent) of the hospitalized group and 33 (47 per cent) of the antibiotic group. Changes in the fecal flora were related. In 45 of 75 in the hospital group, for example, *E. coli*, the predominant organism, was replaced by *Klebsiella*, *Enterobacter*, and *Proteus* as the predominating organism. Those who were treated had, in addition, *Serratia* and *Pseudomonas*.

Duration of hospitalization alone was important in effecting this change, but antibiotics appear to cause more of a change more quickly. It should not be presumed that hospitalization

causes changes in gram negative bacteria alone. *S. aureus* increases a 1,000 fold in number in the stool, as well, and accounts for some of the infections due to this organism that develop in patients postoperatively. The effect of antibiotic prophylaxis of the hospitalized patient is to augment a change already in progress, and by this definition the incidence of staphylococcal infection is a function of both drug exposure and hospital residence.

In summary, the origins of bacteria involved in postoperative sepsis are the people in closest contact with the patient, the things with which the patient is in contact, and the patient himself. It is possible to exert some control over the people who deal with patients, and it is possible to reduce the extent of nosocomial contamination. We are really only beginning to understand the scope of the patients' bacterial populations and at present are still far from having any appreciable effect upon them. It is to the patient that attention must be directed if control of infection is to become possible.

Prevention of Infection

A number of things have been done to prevent infection. The most effective have been the improvements in surgical technique to reduce trauma, and improvements in pre- and postoperative care of the patient. His nourishment, hydration, and relief or prevention of bowel distension have all played an important part in decreasing the hazards of surgery. Less effective have been the measures directed primarily at bacteria. These include (1) ultraviolet irradiation of circulating air and laminar flow devices to prevent bacteria from circulating between patients, (2) antibiotic prophylaxis, and (3) isolator systems employing both of the former methods—that is—enclosure of the patient so that nothing but sterile air reaches him, and obliteration of all fungi and bacteria from his airway and gastrointestinal tract. Each of these methods has worked in the hands of some people but none provide any predictable benefit to all users.

Altmeier showed no difference in the incidence of postoperative infection when ultraviolet lights were employed randomly on his service. There are no convincing data to show that the various air flow systems have any effect on postoperative sepsis either. Antibiotic prophylaxis has been employed since the first sulfonamide could be given and a bewildering voluminous literature has developed. Much of what has been said in support of prophylaxis is based on uncontrolled, often retrospective, observations; and, on the other hand, a good deal of the criticism has been directed at the failure of specific drugs to prevent all infection. A principal objection to prophylactic therapy, for example, has been the fact that there are too few antimicrobial agents to prevent all possible viral, bacterial, fungal or protozoan complications. The fact that endocarditis has been reported due to a member of the mushroom family is frightening evidence of the variety of pathogens available.

It is still possible to prevent many infections by the judicious use of antibiotics. Burke has shown that antibiotics administered within three hours of the time that contaminated sutures were used to close a wound in the experimental animal prevented infection. Antibiotics given later than three hours were unsuccessful. It is likely that antimicrobial agents chosen to prevent suture line infection by specific bacteria, that is, by bacteria indigenous to the site, would be effective if given during the critical three-hour period. There is no evidence that antibiotics given afterwards do any more than rearrange the number and variety of potential pathogens. There is no unanimity of opinion on these points.

A very impressive study has been published that claims that any less than 10 days prophylaxis following cardiac surgery is inadequate to prevent infection. The authors list their experience with over 600 consecutively treated patients. Their results are impressive; but their evidence that 10 days of antibiotic therapy is necessary in the postoperative period is lacking. A controlled study of prolonged versus day of surgery prophylaxis showed fewer and less serious complications with one dose of keflin.

Efforts to prevent complications of colon resection include a large number of procedures whose effects were visible before the introduction of antibiotics. Preoperative antibiotic usage has many supporters who express themselves with vehemence. Almost as vehement have been the reports of others who have found no use for such prophylaxis in elective surgery of the bowel. It is agreed by both groups, however, that emergency procedures done before adequate preparation of the bowel is possible can be carried out with greater safety to the patient and fewer complications if parenteral antibiotics are administered at the time of the operative procedure. Given in this fashion, the drugs provide adequate blood and tissue concentration to provide protection.

The isolator system which encloses the patient with a plastic shield to prevent all contact is used in conjunction with drugs to eradicate all microorganisms that are present in the skin, in the mouth and upper air-way, and in the stool.

Sterile food helps to maintain a bacteria and fungus-free environment. This sort of system has been used with varying degrees of rigidity to treat burned patients and patients with hematological malignancy, especially those undergoing such procedures as marrow transplantation. In many situations it works so long as the patient remains in it to prevent infection due to bacteria and fungi. It can, of course, have no effect on viral disease which is beginning to increase in frequency as a cause of sometimes grave postoperative complications. The difficulty with the system is that the patient must be recolonized with saprophytic bacteria in appropriate number and variety before release from the bacteria free state. In one case known to the author, a child who survived all of these procedures including judicious recolonization died within days of overwhelming and completely unexpected Pseudomonas bacteremia.

Objections listed to each of the systems used to prevent infection should not be regarded as blanket condemnation so much as an appraisal of some of the deficiencies. Clearly there is some merit in each approach. To use any system to prevent infection it is necessary to know what is being prevented.

Recognition and Management

A method for patient evaluation and management that could be of assistance in reducing the incidence of infection and its danger by increasing the speed and accuracy of its recognition is discussed below. The steps recommended are to be considered as additions to the standard preoperative, operative, and postoperative care.

Preoperative Steps. Before surgery, especially if it is expected to be prolonged, or involve patients with diminished host defense, or if prolonged antibiotic use or hospitalization is anticipated. the following procedures are recommended:

(1) Accurate determination of body temperature at regular intervals for at least 24 hours preoperatively. Many patients are admitted just before elective procedures and this precludes such observation in the hospital. But most can take and record their own temperature. This may appear to be of exceptionally little importance: it is not. A glance at the temperature charts of patients who have undergone major surgery and have postoperative fever, shows that it is difficult to tell when the temperature actually began to rise. On the day before surgery there are often gaps in the temperature chart because the nursing staff, adhering to its rule of conduct, omits taking the temperature of a patient who is not in his room but rather in x-ray or in some other area. Unless fever was the reason, or among the reasons for surgery, its presence on the day before would demand explanation or a delay.

(2) Within a few days of an operation, cultures should be obtained in accord with the unexpected duration and type of procedure. All patients who undergo inhalation anesthesia should have cultures of the throat done to establish the type of bacteria that will be thrust into the trachea during intubation. Culture of the stool of anyone in the hospital for longer than a week is necessary to determine if a shift in bacterial population has occurred and to learn the predominant strain present. With knowledge of the bacterial species in these two areas preoperatively, the choice of antibiotics is simplified should infection occur or should contamination be a complication. Furthermore, the asymptomatic presence of respiratory pathogens such as *Pneumococcus*, Group A *Streptococcus* and *H. influenzae* can be revealed, and the pathogens banished before the opportunity for infection is created. Cultures are urged not so much for the prevention of obvious threats, as to enhance the capacity of the physician to deal swiftly and effectively with the unexpected ones.

During Surgery. During certain operations, cultures of the following areas are of value: (1) the lumen of resected bowel to be anastomosed, especially if antibiotics have been used preoperatively; (2) the bronchial lumen of the remant following resection of the lung; (3) the retroperitoneal field on which an aortic prosthesis is to be placed; (4) the portion of the heart to which a prosthetic valve is to be sutured and the margins of the sternotomy wound; (5) the bed of any area from which a mass such as a brain tumor or an organ is removed; and (6) the synovial membrane of a joint that is to be entered, especially if a foreign body is to be inserted.

To this list more can be added. The reason for the culture is to assure the surgeon that the field was free of bacteria or fungi at the moment of anastomosis or resection, or, on the other hand, to identify the presence of an organism. There is reluctance in some cases to obtain cultures while antibiotics are in use on the presumption that the drugs will prevent growth; if they do, they are working and a negative culture provides the evidence. This is not always the case. To a patient with *Salmonella* arteritis, 6 grams of chloramphenicol had been given daily for two weeks before the aneurysm was resected. Culture of the bed in which the prosthesis was implanted was sterile, but cultures of the aortic

aneurysm yielded abundant *Salmonella species* even though a bolus of the drug was administered just before resection.

Postoperative Procedure. After the operation has been completed, cultures are not advised routinely. The specific indications are numerous: (1) blood cultures in the febrile patient; (2) wound cultures if there is purulence or unexpected swelling or redness; (3) culture of the stool or of the urine if there is diarrhea or if catheterization has been necessary; (4) culture of the sputum or cultures of the tracheal lumen in situations in which intubation or artificial ventilation is required for more than a day in the postoperative period; and (5) cultures and gram-stained smears of exudate from any purulent discharge. If there were a choice of one or the other of these two procedures the stained smear is often the more valuable. It proves or excludes the fact of purulence by revealing polymorphonuclear cells, and discloses organisms present whether aerobic or anaerobic, and whether bacteria or actinomycetes are present.

Reviewing this long list of recommended cultures, it would appear that my proposal for patient evaluation is no more than a sampling of microorganisms before, during, and after surgery. It is only for the very sick patient facing prolonged hospitalization and extensive surgery that so comprehensive a list would be of value. For all patients whose surgical treatment could be complicated by infection, however, it is important to be aware of the critical time when bacteria or other microorganisms can be introduced that will cause an anastomosis to fail or a prosthesis to be rejected. The steps outlined are neither time consuming nor complicated, and they will provide important information that will make it possible to prevent some infections and to treat effectively those that almost inevitably occur.

Most important is the fact that the patient is normally colonized with many bacterial and fungal species. Their relationship to one another, and their balance, undoubtedly prevent infection most of the time. When the balance is altered, the incidence of complications is increased. It is of the utmost importance, therefore, for the physician to be aware of the bacteria that are present throughout the hospital stay of his patient.

Waterbeds May Aid Prematures

WATERBEDS for premature infants? Four researchers from the Stanford University School of Medicine say they are safe and may help decrease the number of apneic (stoppage of breathing) spells in low birth weight newborns. Their report appears in a recent issue of *Pediatrics*, the monthly scientific journal of the American Academy of Pediatrics.

The authors conducted their preliminary study with 21 newborns, all premature and all weighing less than 4.25 pounds at birth. Ten of the infants were placed on a gently vibrating waterbed sometime before their sixth day of life, and remained on the bed for a week. The 11 other infants served as a control group.

First of all, the researchers found that a week on the waterbed caused no significant differences in heart rate, temperature, or other vital signs between the waterbed newborn and the control group. There was also no difference between the two groups in the weight loss or frequency of vomiting.

They did discover a significant difference, however, in the number of apneic episodes between the two groups. In fact, the infants placed on the waterbed showed a decrease in apneic episodes, while infants in the control group showed an increase.

Successful Pregnancy Following Repair Of A Ruptured Uterus

F. Jay Keefer, M. D.; and Rodolfo Walss-Rodriguez, M. D.

With the increasing rate of cesarean sections, the hazard of uterine rupture during subsequent pregnancy is also increasing. A case report of uterine rupture following classical cesarean section is presented. The uterine rupture was repaired. The pre-pregnancy evaluation, including hysterosalpingogram which showed a uterine defect in the lower segment, repair of the defective uterine scar, and subsequent pregnancy with successful outcome are presented.

Proposal of repair of the ruptured uterus as an alternate method to hysterectomy is suggested. Protocol for evaluation and follow-up of the patient with repair of the uterine rupture is presented.

Rupture of the uterus is one of the most serious accidents in obstetrics. Cavanagh[3] has reported that ruptured uterus accounts for 5 per cent of the maternal mortality in the United States. Keifer, and Palerme and Friedman[7,9] have shown that, in spite of the improved physical facilities and patient care, the incidence of ruptured uterus has increased in recent years.

In the United States it is generally agreed that the treatment of choice for ruptured uterus is a hysterectomy, partial or total. The reason for the choice of hysterectomy is the potential risk of rupture or dehiscence in subsequent pregnancies. In reviewing the world literature, it is evident that in some areas of the world, repair, rather than removal, of the ruptured uterus is the treatment of choice. Reasons for the repair, cited by Aguero and Kizer[1,2] from Venezuela and Lawson and Ajabor[8] from Nigeria, are that repair of the ruptured uterus is easier and quicker; childbearing capacity is retained, and maternal mortality is lower.

Aguero and Kizer[1] also indicate that menstruation in Latin American women of childbearing age is important from a psychological standpoint.

Although we agree that hysterectomy is the procedure of choice for ruptured uterus, we also believe that age, parity and desire of future pregnancies should be considered at the time of the definitive surgical therapy, especially since adoption has become so difficult in recent years.

The Authors

- **F. Jay Keefer, M. D.; and Rodolfo Walss-Rodriguez, M. D., both from the Department of Obstetrics and Gynecology, Ohio Valley Medical Center, Wheeling, West Virginia.**

Case Report

W.M. is a 27-year-old white, married female, P 4-2-1-1. Her first pregnancy, at age 20, was a twin pregnancy. The first baby was delivered vaginally by breech presentation and resulted in a stillborn. The second baby was delivered by classical cesarean section successfully. This baby is living and well today. The patient then had a five-year period of involuntary infertility.

At age 25 she became pregnant and did well until 31 weeks gestation, when she developed premature labor. In spite of hospital observation, the uterus ruptured through the classical cesarean section scar. At the time of surgery, a stillborn male, weighing three pounds, four ounces, was found floating in the abdominal cavity. The placenta was unseparated. The infant and the placenta were extracted and the uterus was repaired in four layers with chromic #1. It was necessary to transfuse the patient with two units of whole blood. Her postoperative course was uneventful.

The patient had a strong desire to have another child. On June 7, 1972, three and one-half months after surgery, a hyterosalpingogram was done which showed a defect in the anterior wall of the lower uterine segment (See Figure 1).

On November 7, 1972, she was admitted for repair of the uterine defect. While awaiting hospital admission, she became pregnant and a therapeutic abortion of a six-week gestation was performed so that careful repair of the defect could be accomplished. The classical cesarean section scar with its defect was excised in such a way that the uterine muscle bled freely from cut surfaces. Three layers of interrupted chromic sutures were carefully placed to repair the uterus. The postoperative course was uneventful. A repeat hysterosalpingogram was done three months later showing no defect (Figure 2).

On April 18, 1973, the patient was seen for her first prenatal visit. Her last menstrual period was

Figure 1.

February 17, 1973, three and a half months after repair of the uterine defect. On examination, the pregnant uterus corresponded in size to the last menstrual period. The patient noticed quickening on June 15 and the first fetal heart tone was heard by fetoscope on June 29, 1973. At approximately 25 weeks gestation, the patient began having contractions. She was restricted to bed rest, 20 hours daily at that time. She was also placed on Vistaril, 25 mg. t.i.d. and Vasodilan, 40 mg. daily. These controlled the contractions for seven weeks.

Figure 2.

On September 26, 1973, at 32 weeks gestation, she was admitted to the hospital with painful contractions. She was placed on absolute bed rest and intravenous alcohol. This treatment was used on and off for two weeks to control contractions. On October 10, 1973, at 35 weeks gestation, a classical cesarean section and tubal ligation were performed because the patient was having painful contractions every three minutes, lasting 40 to 60 seconds with good volume. A five pound, one ounce male infant was delivered. The infant was depressed and required resuscitation by an anesthesiologist and pediatrician. After the first 24 hours the baby did quite well. The postoperative course was uneventful and the patient was discharged with her infant on October 25, 1973. The baby at age one is reported to have normal growth and development.

Comment

With the current worldwide focus on improving perinatal morbidity and mortality rates, there is an increasing liberalization of indications for cesarean section; in our hospital the rate of cesarean sections has increased from six per cent in 1966 to 12 per cent in 1973.

Greenhill[5] reports an increase from four to five per cent to ten to eleven per cent as an accepted rate, and John W. C. Johnson[6] from Johns Hopkins University reports a 15 to 20 per cent rate at that hospital with a primary cesarean section rate of 8 per cent.

With the increasing rate of cesarean sections, uterine rupture has become an increased hazard for the pregnant woman.[7,4,3] Keifer[7] has shown

that a rupture or dehiscence of a uterine scar is a real hazard regardless of location. Palerme and Friedman[9] report that there is one uterine rupture for every 100 cesarean sections, while there is only one in 6,200 deliveries.

Aguero and Kizer[2] reviewed the world literature and found that in 2,073 cases of uterine rupture by 37 authors, there were 854 repairs, or 41.3 per cent. These authors (Table 1) added 62 patients with 92 additional pregnancies after uterine rupture and repair which ended in abortions in 26, spontaneous deliveries in 15, forceps delivery in eight, and cesarean sections in 43. Four of these patients had a repeated rupture with subsequent repair. They report no maternal mortality.

TABLE 1

Author	*Number of Patients*	*Number of Repairs*	*Number of Pregnancies*	METHODS OF DELIVERY			*Abortion*	*Repeat Rupture*	*Death*
				C-Sections	*Forceps*	*NSD*			
AGUERO & KIZER (Venezuela)	62	62	92	43	8	15	26	4	0
REYES CEJA ET AL (Mexico)	100	65	22	9	4	4	3	1 (F.D.)	1
RITCHIE (Nigeria)	193	28	36	26	—	4	6	2	2
TOTAL	355	155	150	78	12	23	35	7	3

Reyes-Ceja,[10] et al, reports 65 patients of 100 who had repair of a ruptured uterus and, in 28 of these patients, a complete follow-up was obtained. Nineteen of the patients followed had a total of 22 pregnancies which included three abortions, two premature deliveries, 13 who delivered between 38 and 42 weeks, two who delivered after 43 weeks, and two patients who were carrying pregnancies of 36 to 38 weeks gestation at the time the report was being written. Delivery was by cesarean section in the majority of the patients, although eight patients were permitted to deliver vaginally. Only one of these patients had a subsequent rupture. These cases suggest that the uterine rupture may be repaired in women of low parity who desire further pregnancies.

Ritchie[11] from Nigeria reports 28 patients with repair of a ruptured uterus who had 36 pregnancies. Of these patients, two had repeated rupture and one of them died because of lack of adequate blood for transfusion.

Aguero and Kizer[1,2] and Lawson and Ajabor[8] believe that the suture of the ruptured uterus is a logical procedure for the majority of dehiscences or ruptures, a statement with which we do not concur. We do propose that repair of the ruptured uterus is an alternate method when childbearing function is to be preserved or if facilities are such that hysterectomy is not possible at the time of the rupture.

Discussion

Rarely, at the time of rupture, can the obstetrician discuss the possibility of retaining childbearing function with the patient. Repair of the uterus should be kept in mind as an alternate choice to hysterectomy, realizing that subsequent pregnancies are risky and require special considerations.

The pre-pregnancy evaluation of our patients and the close prenatal care resulting in approximately 14 days of intensive obstetrical care hospitalization prior to delivery resulted in an extraordinary expense. We felt that both of these measures were necessary to insure the safety of our patients.

When uterine rupture has occurred and the obstetrician elects to repair the rupture in order to preserve childbearing function, we strongly suggest that the following requisites be met if repeat rupture is to be avoided:

1. A careful pre-pregnancy evaluation including hysterosalpingogram as suggested by Keifer[7] and, as in this case, if any defect in the uterine scar is found, this defect should be corrected prior to subsequent pregnancy. The lateral and oblique views of the hystersapingogram are often necessary to demonstrate this type of defect.
2. Once the patient has become pregnant, she is considered high risk and must be observed very closely.
3. As stressed by Ritchie and Farrell,[11,4] these patients should be hospitalized early, 32 to 33 weeks if the rupture has occurred in classical cesarean section scar, and 36 weeks if the rupture occurred in low segment scar.

4. In case of premature labor, all the accepted methods to stop contractions must be employed until the baby has a good chance of survival.
5. Delivery should be accomplished by cesarean section as labor in these patients would be too risky.

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Carotid Sinus Syncope: Its Diagnosis And Management

John Schwalbach, M. D.; and Robert J. Marshall, M. D.

Syncope, or sudden loss of consciousness, is a common clinical problem. It is the result of temporary diminution or cessation of cerebral blood flow. This, in turn, may be caused by any one of a large number of transient patho-physiological alterations of the systemic circulation. Identification of the precipitating cause is an essential preliminary to rational management.

One of the more common situations resulting in syncope is the patient with a hypersensitive carotid sinus. In 1862, Waller noted that pressure over the carotid sinus transiently slows the heart. Hering demonstrated that the bradycardia is reflex, caused by stimulation of receptors in the carotid sinus whose activity is transmitted to the brain by the nerve that often bears his name. Weiss and Baker,[1] in their classical paper, drew attention to the fact that in some patients episodes of dizziness or syncope are secondary to carotid sinus hypersensitivity, that is, to an inappropriate response of the receptor organ to mechanical stimuli.

In this paper we emphasize some of the features of carotid sinus hypersensitivity and carotid sinus syncope, with particular reference to three of our patients. We discuss briefly the differential diagnosis in patients with a history of syncope and draw attention to recent advances in diagnosis and therapy.

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Case Reports

Case 1. WH, a 62-year-old man, was admitted to West Virginia University Hospital after suddenly losing consciousness while fishing. Immediately after he turned his head backwards in the preliminary stage of casting his fly, he lost consciousness and fell to the ground. Companions noted convulsive movements of all four limbs for a few minutes and, during recovery, a postictal stare was also noted.

For the preceding 12 years he had been treated for hypertension, and for 10 years he had typical angina of effort, without myocardial infarction. In recent months he had noted faintness, dizziness or a staggering gait after suddenly turning his head. He was taking no drugs.

The blood pressure was 150/90 mm. Hg and the pulse was 104 per minute, brisk and regular. There were grade 1 sclerotic changes in the retinae, and there were bilateral carotid and femoral arterial bruits. A grade 2/6 early systolic ejection murmur was heard at the base of the heart. The left ventricle was not prominent. The remainder of the physical examination was unremarkable.

An EEG was normal. A brain scan showed evidence of impaired perfusion in the distribution

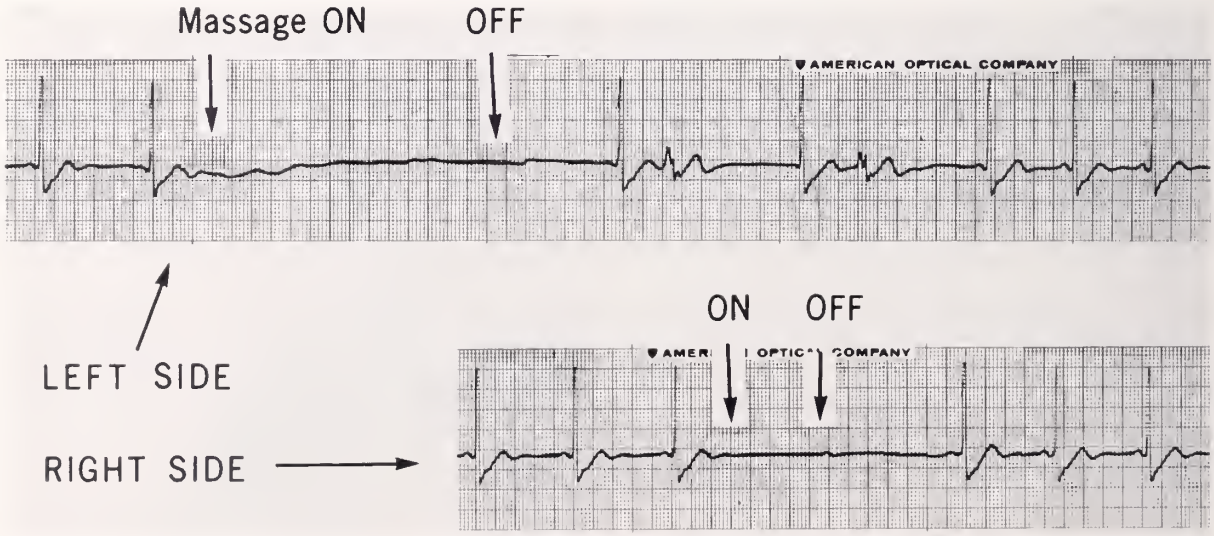

Figure 1. ECG (lead II) recorded during carotid sinus massage in Case 1. For explanation, see text.

of the right middle cerebral artery. The resting electrocardiogram (ECG) was normal. Gentle and transient massage of the left carotid sinus, however, caused temporary sinus arrest (Figure 1). This was followed by two atrio-ventricular (A-V) nodal escape beats with coupled ventricular premature beats before normal sinus rhythm returned. Light massage of the right sinus for one second, barely enough to deform the skin, caused sinus slowing and one cycle of A-V block (Figure 1).

The nature of the problem was explained. He was advised to avoid situations in which the sinus might be inadvertently stimulated, such as sudden neck rotation, hyperextension of the neck during shaving, driving an automobile (especially reversing) and wearing tight neckwear. He was discharged and to date has had no recurrence of symptoms.

Case 2. RWR, a 68-year-old retired salesman, had surgical decompression of an entrapped right median nerve. He returned to the clinic for removal of sutures 11 days later. During this minor procedure he felt warm, began to sweat, became faint and collapsed. The neurosurgeon could feel no pulse. Within one or two minutes he began to recover and soon felt normal. He was admitted for observation to the Cardiac Care Unit.

Apart from intention tremor of the arms (benign cerebellar tremor had been diagnosed previously), he had no other medical problems and he was taking no drugs.

The blood pressure was 140/82 mm. Hg. and the pulse was 72 per minute and regular. There were no cardiac murmurs or arterial bruits. Physical examination was within normal limits for his age.

An ECG showed no abnormality. Gentle massage of the right carotid sinus for four seconds resulted in sinus arrest lasting eight seconds; the effect was comparable after left-sided massage (Figure 2). There were no symptoms.

He was given advice similar to that in Case 1, and has had no further episodes to date.

Case 3. WJ, a 63-year-old deputy sheriff, had a two-year history of angina pectoris. During the year prior to admission to a hospital, he also noted a number of dizzy spells that had occurred for no apparent reason. One morning he awakened, feeling very dizzy. Shortly after, he developed severe oppressive precordial pain that radiated to the left arm, with two brief episodes of loss of consciousness. On admission to a community hospital, where his cardiac rhythm was monitored, he had several further syncopal spells associated with periods of asystole. He was transferred to the West Virginia University Hospital. He had been taking no drugs.

Physical examination was normal. An ECG showed sinus rhythm, with no evidence of conduction abnormalities or of infarction. Serum levels of CPK, GOT and LDH did not rise. Gentle carotid sinus massage resulted in prolonged asystole. Because of this finding, coupled with the multiple episodes of syncope and the history of angina, it was thought he needed a pacemaker. Accordingly, a permanent, Medtronic transvenous standby (demand) pacemaker was inserted. He has had no further dizziness or syncope in the subsequent 27 months.

Figure 3 is a recent rhythm strip (lead II) recorded before, during and after unilateral carotid sinus massage. Each P wave is indicated by an asterisk. With the onset of massage the P waves are suppressed and the artificial pacemaker activated, resulting in regular pacemaker

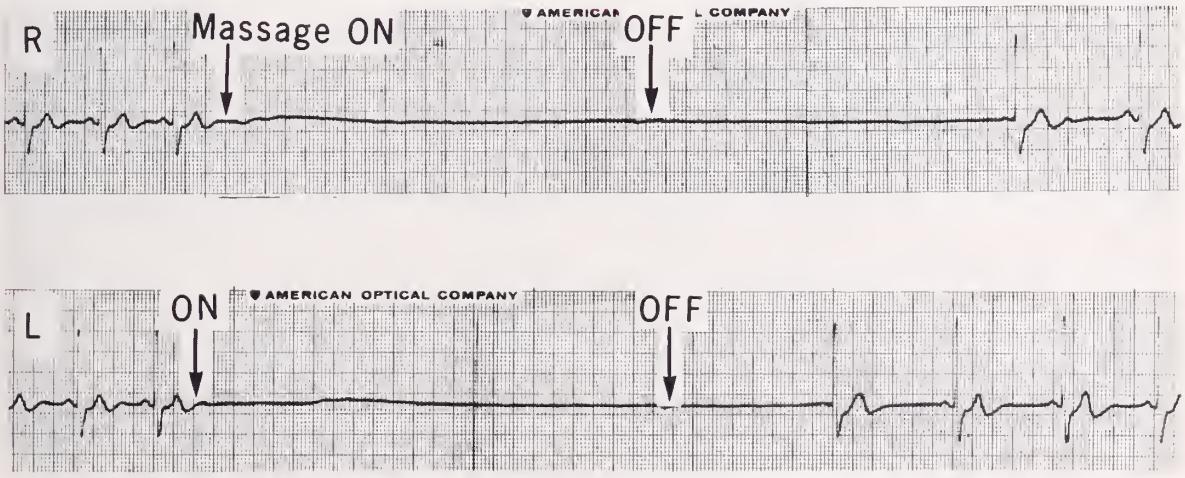

Figure 2. ECG (lead II) recorded during carotid sinus massage in Case 2. For explanation, see text.

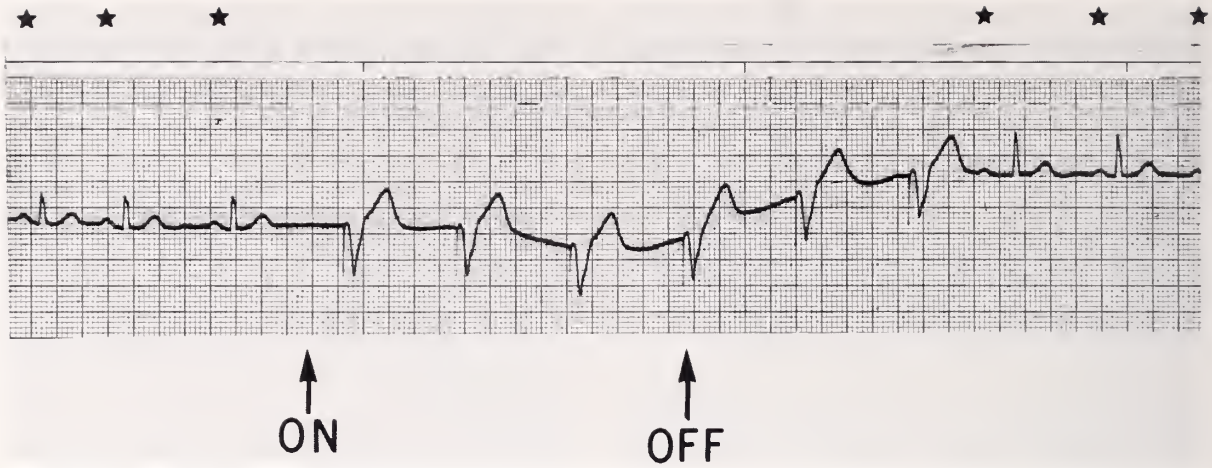

Figure 3. ECG (lead II) recorded during carotid sinus massage in Case 3, demonstrating standby (demand) role of artificial pacemaker. For further explanation, see text.

capture of the ventricles at a rate of 68 per minute. P waves reappear about two seconds after massage, resulting in return to sinus rhythm with concomitant suppression of activity of the artificial pacemaker. The PR interval of the first cycle to return is prolonged, illustrating the fact that carotid sinus stimulation suppresses A-V conduction as well as sinus impulse formation.

Discussion

Pathophysiology:

The baroreceptor (or mechanoreceptor) reflex is the best known and probably the most important reflex in the regulation of the circulation. It is initiated through the stretching of spray-like nerve endings that are most abundant in the walls of the carotid sinus, which is a fusiform dilatation of the internal carotid artery immediately above the carotid bifurcation, and of the aortic arch. Stretching occurs in response to mechanical stimulation such as sudden increase in intra-arterial pressure or massage of the vessel wall. Showers of impulses are then transmitted from the aortic arch via the vagus nerves to the medulla. From the carotid sinus, impulses are transmitted via the carotid sinus nerve (of Hering) to the glossopharyngeal nerve and thence to the medulla. Most studies of the baroreceptor system have centered on the carotid sinus since its sensory nerve, although small, is discrete and can readily be isolated.

Impulses from active baroreceptors inhibit the vasomotor center and stimulate the vagal center. The former action leads to prompt dilatation of arteries and veins throughout the systemic circulation; the latter slows the heart by suppressing the sinus node (and subsidiary pacemakers) and also diminishes the strength of ventricular contraction. The net effect is a rapid decrease in arterial pressure. Conversely, when the arterial pressure suddenly decreases, baroreceptor activity is diminished and the medulla is deprived of impulses. This leads to stimulation of the vasomotor center and inhibition of the vagal center, the net effect being a restoration of the blood pressure toward normal. Because the baroreceptor system counteracts sudden increases or decreases of arterial pressure, it has been called the buffer system, and the afferent nerves, "buffer nerves."

Recent work[2,3] has shown that the carotid sinus dominates in the regulation of arterial blood pressure, the aortic arch assuming importance only when the pressure is abnormally increased. In health, therefore, the carotid sinus is a vital component of circulatory homeostasis. When it is diseased, baroreceptor activity is likely to be abnormal.

The normal carotid sinus is a fusiform dilatation of the internal carotid artery and the muscle in its wall is thin, suggesting that it has an increased distensibility consistent with its baroreceptor function.[4] It is, however, unusually subject to atherosclerosis. With increasing age there is progressive obliteration of its lumen and, in the elderly, it is sometimes hardly more than a fibrotic sac. These changes must substantially lessen its distensibility and, hence, its efficiency as a baroreceptor. The effects of atherosclerosis must depend to some extent on the orientation of receptors in the vessel wall. If they are pulled circumferentially, then increased rigidity should lead to *decreased* baroreceptor response. If, however, they are compressed from within out, increased rigidity might lead to *increased* response, particularly to mechanical stimulation of the vessel wall such as carotid sinus massage.[5] An additional factor leading to

abnormal baroreceptor activity may be damage to nerve endings in the diseased vessel wall.

Diagnosis:

Careful history-taking is important. While syncope associated with intermittent high grade A-V block (Stokes-Adams attacks) is usually not associated with any recognizable precipitating factor, carotid sinus syncope characteristically accompanies sudden movements or intermittent compression of the neck. Examples of these situations are: looking backwards while reversing an automobile, stretching the skin of the neck during shaving, and wearing tight clothing such as a clerical collar. The diagnosis was strongly suspected in Case 1 from the story that syncope occurred in the process of fly-casting, which is often accompanied by a rapid and complete rotation of the neck.

Confirmation is obtained by stimulating the carotid sinus and simultaneously recording lead *II* of the ECG. Massage should be performed first on one side and then on the other. Simultaneous bilateral massage must be avoided, since in hypersensitive individuals it may result in prolonged vagal inhibition of the heart. The massage over the carotid bifurcation at the level of the upper border of the thyroid cartilage should be gentle at first for five to ten seconds. If asystole occurs, the massage should be stopped as the effect persists for several to many seconds afterwards. Should marked slowing or asystole not occur, the massage is repeated more briskly. Very strenuous massage should be avoided since it may compress the artery sufficiently to cause dizziness or syncope from reduced cerebral perfusion even in the absence of slowing, and since there is a risk of dislodging pre-existing atheroma or thrombus from the artery and causing cerebral infarction.

Some feel that simultaneous recording of the ECG is impractical.[6] We disagree. Without it, one cannot tell for certain the nature of the electrical disturbance in the heart when pulses disappear. While it is most often asystole, some patients have developed paroxysmal ventricular fibrillation.[7]

Since the strength of the stimulus (massage) cannot be accurately measured or controlled, it is unrealistic to set rigid criteria for a "positive" or "negative" response. The criteria of Franke,[8] however, are useful: (a) abnormal—cardiac asystole for at least three seconds, (b) equivocal—transient slowing of the sinus rate by 30 to 50 per cent or asystole for two to three seconds, and (c) normal—any rate changes less marked than the above values.

In the past, considerable attention was given to change in arterial pressure. This, however, is almost impossible to measure during the transient periods of asystole or slowing unless an intra-arterial needle is used; further, it adds little or nothing to clinical assessment, since a decline in arterial pressure is an almost inevitable consequence of asystole or marked bradycardia.

The availability of equipment for long-term tape recording of the ECG has enhanced diagnostic precision in ambulant patients with intermittent syncope. If a patient becomes dizzy or loses consciousness during recording, subsequent analysis provides clear evidence for or against the cause being an arrhythmia (such as sinus arrest, high grade A-V block or paroxysmal ventricular fibrillation). Ten-hour or 24-hour tape recordings are appropriate when the evidence from massage is equivocal. Hypersensitivity of the carotid sinus is not constant from day to day, and the diagnosis should not be discarded just because the initial result is inconclusive.

Carotid sinus hypersensitivity and syncope are more common in men, probably because they are more subject to atherosclerosis. It is more likely to occur with coexisting ischemic heart disease, especially if the blood supply to the sinus node is impaired, or if digitalis alkaloids are being taken in large doses, since these may suppress function in the sinus node as well as in the A-V junction.

Differential Diagnosis:

Hypersensitivity of the carotid sinus is but one of many potential causes of syncope. Detailed consideration of them is beyond the scope of this paper. It is appropriate, however, to discuss briefly some other cardiac and peripheral vascular mechanisms that may be responsible. We re-emphasize the importance of accurate diagnosis since this may be life-saving: detailed history-taking, careful physical examination of the cardiovascular and nervous systems, a 12-lead ECG, tape recording of the ECG, provocation tests and, when indicated, special investigations such as cardiac catheterization, intracardiac electrography (His bundle), EEG, brain scanning and cerebral angiography.

Obstructive lesions in the heart. Pedunculated myxomas of the left atrium may prolapse into the mitral valve ring causing intermittent obstruction; this may be precipitated by a change in body position. In recent years, we have seen four cases of atrial myxoma: the two patients with left-sided tumors had symptoms consistent with intermittent mitral valve obstruction, while

the two with right-sided tumors presented with symptoms and signs of superior vena cava obstruction.

Syncope is a late symptom in severe aortic stenosis and patients with this symptom urgently need valve replacement. Characteristically, it occurs during exertion. While the main cause of the syncope is a low and relatively fixed cardiac output, recent work[9] has shown that an additional factor may be absence of the compensatory vasoconstriction in non-exercising muscles.

Rarely, patients with pulmonary stenosis (isolated, or with associated veno-arterial shunt) may have syncope on effort, as may patients with severe obstructive pulmonary vascular disease, such as idiopathic pulmonary hypertension.[10]

Cardiac Arrhythmias. Recurrent syncope is a feature of high grade A-V block, either established or intermittent. In established block, the ECG is diagnostic. In intermittent block, the ECG between episodes may be normal, and long term ECG monitoring may be needed to permit a diagnosis. Not infrequently, however, clues are present in the resting ECG such as the association of right bundle branch block with abnormal leftward or rightward deviation of the QRS axis in the frontal plane, or with first degree A-V block. When the diagnosis has been made, pacemaking is indicated.

Intermittent sinus arrest,* sinu-atrial block, or severe sinus bradycardia (with or without associated paroxysms of tachycardia), is an arrhythmia that has received much attention in recent years. The unscientific but picturesque synonyms, "sick sinus syndrome," or "brady-tachy syndrome," are commonly used. While the ECG manifestations are similar to those in patients with carotid sinus syncope, the disturbed function of the sinus node is due to impaired oxygen supply (usually from either ischemic heart disease or chronic cor pulmonale) rather than to excessive vagal activity. For most cases, pacemaking again is indicated.

Tachyarrhythmias such as paroxysmal atrial tachycardia, flutter or fibrillation rarely cause syncope, since the ventricular rate in adults does not usually exceed 180 per minute. Atrial flutter with 1:1 A-V conduction may result in ventricular rates up to 240 per minute in adults and 360 per minute in infants; at these rates, the diastolic filling intervals are inadequate to maintain cardiac output, and syncope is likely. Paroxysmal ventricular tachycardia is more liable to provoke syncope; since it usually occurs in a severely diseased heart, cardiac output is more readily compromised. Although ventricular fibrillation is usually a "terminal" arrythmia, it occasionally occurs on a repetitive basis. One of us recently saw an out-patient with a history of recurrent faint spells. Twenty-four-hour tape recordings showed that they were due to bursts of ventricular fibrillation lasting 30 to 120 seconds and ending spontaneously.

Sometimes the arrhythmias are iatrogenic. Digitalis alkaloids in toxic doses can cause syncope either from excessive slowing of the ventricular rate or from causing ventricular tachycardia or fibrillation. Quinidine also may cause recurrent ventricular fibrillation, possibly because prolongation of the QT interval of the ECG results in a greater opportunity for a succeeding ventricular premature beat to occur during the "vulnerable" period. In the Jervell-Lange Neilsen syndrome (congenital bilateral deafness, prolongation of the QT interval and attacks of unconsciousness), the episodes of syncope may also be due to ventricular fibrillation.[11]

Peripheral vascular mechanisms. The commonest cause of sudden loss of consciousness is the *simple faint* (vasovagal or vasodepressor syncope). The clinical features are well known. The physiological disturbance consists of a precipitous fall in blood pressure, usually with a marked bradycardia.[12] Instead of the reflex peripheral vasoconstriction that normally tends to counteract the fall in arterial pressure, there is marked vasodilatation in skeletal muscle.[13]

Hyperventilation, particularly in anxious persons, leads to disturbance of consciousness. Overbreathing causes sharp decreases in alveolar and arterial pCO_2; in turn, there is cerebral vasoconstriction and peripheral vasodilatation. A careful history and psychosomatic appraisal of the patient readily permit the diagnosis to be made.

During the *Valsalva maneuver* (forced expiration against a closed glottis) in which the intrathoracic pressure is maintained at +40 mm.Hg or more, there is a progressive decrease in arterial blood pressure and left ventricular output. When the blood supply to the brain is sufficiently depleted, syncope results. Occasional attacks of dizziness are common among trumpet-players, who may achieve and hold intra-thoracic pressures up to +160 mm. That fainting is not more common in normal subjects performing the maneuver is due to the fact that reflex constriction occurs in the peripheral vascular bed,* opposing continued decline in the arterial pressure.

*Sinus arrest refers to cessation of function in the sinus node (sinu-atrial node) of the heart and not in the carotid sinus!

In patients with *autonomic neuropathy* (idiopathic orthostatic hypotension), reflex constriction of the systemic arterioles does not occur in response to stresses such as standing, passive tilting and muscular exercise,[14] and syncope is common.

Inappropriate use of *anti-hypertensive* drugs is a frequent cause of syncope in the elderly. The problem is more acute with ganglion-blocking or adrenergic-blocking drugs that suppress reflex adjustments of the peripheral circulation, but other drugs may be hazardous through causing excess salt and water depletion. There is no question that diastolic hypertension should be treated. The problem occurs during attempts to treat vigorously systolic hypertension in the elderly. This practice unfortunately is being encouraged by a number of epidemiologists: it is a dangerous and illogical practice and should be strongly condemned.

Paroxysmal coughing may also cause syncope. Left ventricular output is reduced, in addition to which the paroxysmally raised intracranial pressure compresses the cerebral capillaries and veins. Syncope can also occur during *micturition* in elderly men with enlarged prostate glands. The unconscious performance of a Valsalva maneuver at the start of micturition may be responsible. An additional mechanism may be the loss of arterial and venous tone following release of tension in the wall of the bladder. Syncope can occur in younger men when they stand to void immediately after rising from bed; it is then related more to motionless standing than to the act of voiding. Coggins, et al[15] noted transient A-V block with a ventricular rate of 20 per minute in a patient who was urinating.

Another patient studied by us, who had obstruction from prostatic carcinoma, presented with a history of micturition syncope. Monitoring showed the mechanism to be paroxysmal A-V block with ventricular fibrillation. Treatment with a permanent pacemaker followed by prostatic resection prevented recurrence.

Management:

If the spells are infrequent and clearly related to neck movement or pressure, a full explanation may be all that is needed to avoid the problem. Driving a car should be forbidden; in this situation, even brief unconsciousness may be fatal for either the patient or an innocent bystander.

Drugs such as atropine (vagolytic) or isoproterenol (sympathomimetic) have sometimes been prescribed but are generally useless.

Surgical denervation of the carotid sinuses[16] and intracranial section of the glossopharyngeal nerve[17] are of historical interest only. The former was sometimes followed by prolonged and severe hypertension[18] due to loss of the baroreceptor buffer, and in a few cases by major strokes. The latter was ineffective. Similarly, X-irradiation of the sinuses[19] had unpredictable effects.

The recommended treatment is now insertion of a permanent, transvenous standby (demand) pacemaker for those patients in whom the attacks are frequent or in whom conservative treatment is unsuccessful.[20,21] Pacemaker implantation has a very low risk in experienced hands, and it is likely that more and more patients will be managed this way.[21]

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Screamers May Get Vocal Cord Nodules

THAT loud mouth kid who talks incessantly and shouts everybody down might develop nodules on his vocal cords that will cause a hoarse, raspy voice, according to reports in publications of the American Medical Association.

"You might call them the screamers," observes an editorial in the September 15 issue of the *Journal* of the AMA by Hugh H. Hussey, M. D., Editor Emeritus. The editorial comments on a report that appeared in the October issue of *Archives of Otolaryngology*, a specialty journal of the AMA.

In the *Archives*, Robert J. Toohill, M. D., of the Medical College of Wisconsin, Milwaukee, reports that some one per cent of all children develop vocal nodules. Boys outnumber girls by more than three to one. Peak years are between 5 and 10. Therapy of various types sometimes is successful, but the problem usually disappears anyway at puberty, Doctor Toohill says.

The screaming child often is more immature and less able to handle stressful situations than his peers. Anxiety and stress within the family or at school contribute to his problem. Of the 77 children in the Wisconsin study, 63 had older brothers or sisters or both. The younger ones felt they had to shout to get attention at home and, later, at school.

Parents of 62 of the 77 children described their youngsters as screamers. They were likely to be aggressive, hyperactive, nervous, tense, frustrated or emotionally disturbed.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.
Associate Professor of Medicine

Alpha-Methyldopa-Induced Immune Hemolytic Anemia

Discussants: John E. Van Gilder, M. D.; David Lee, M. D.; and S. V. Ramanan, M. D.

John E. Van Gilder, M. D., Medical Resident, West Virginia University Medical Center.

To manage the anemic patient rationally an adequate investigation to determine the cause must be undertaken. It is especially rewarding to uncover drug-induced hemolysis, for a cure can be effected simply by stopping the offending agent.

Case Presentation

This was the first West Virginia University Hospital admission for this 89-year-old woman from rural West Virginia. Her symptoms consisted of fatigue and "heaviness" in the chest beginning three weeks previously. At another hospital she was found to be anemic and was treated with vitamins, three "liver shots," and one blood transfusion. She could not be cross-matched for a second unit of blood and was consequently transferred to WVU Hospital. She had been taking digoxin for four years and had been started on alpha-methyldopa (Aldomet) and hydrochlorothiazide (HydroDIURIL) six months previously for mild hypertension.

She was an alert, elderly white lady with noticeable pallor. The blood pressure was 185/70. A grade II/VI crescendo-decrescendo systolic murmur at the base radiating to the carotids and a soft holosystolic apical murmur were present. The spleen was not palpable. No other pertinent abnormalities were noted on physical examination.

The hemoglobin was 8.9 gm/dl, the hematocrit, 24.6 per cent, and the leukocyte count, 8,900 with a normal differential. The platelet count was 236,000. The reticulocyte count was 7.3 per cent with an absolute count of 202,000. The serum iron was 53 mcg/dl and the total iron-binding capacity, 200 mcg/dl. The sedimentation rate (Westergren) was 125. The serum haptoglobin was 105 mg/dl (normal). The serum folate level was 11 pg/ml (normal), and a Schilling's test showed 5.8 per cent excretion of radioactive B_{12} in 24 hours.

A bone marrow aspiration showed erythroid hyperplasia with an M.E. ratio of 0.5 to 1. There were no morphological abnormalities. Stainable iron was increased and present mainly in the macrophages. The direct Coombs' test with polyvalent serum was positive, and a warm-reactive IgG antibody with activity against all varieties of Rh antigen was demonstrated.

Because alpha-methyldopa-induced immune hemolysis was suspected, the Aldomet was discontinued. All hematologic values returned to normal over the next few weeks.

Discussion

Although Pythagoras may have alluded to favism in the sixth century B.C., when he said he would "rather face death from the Crotons than walk through a field of broad beans,"[1] our understanding of the hemolytic anemias has come only in the 20th century. In 1904 Donath and Landsteiner described paroxysmal cold hemoglobinuria and postulated an immune mechanism.[2] In 1954 Harris described the first instance of drug-induced hemolytic anemia, as a result of the administration of Stibophen, an antihelminthic. Although certain individuals were noted to develop hemolysis after the administration of primaquine as early as 1926,[4] it was not until 1956 that Carson discovered glucose-6-phosphate dehydrogenase (G6PD) deficiency in primaquine-sensitive individuals.[5] Worlledge, in 1966, first described immune hemolytic anemia from alpha-methyldopa.[6]

A simplified classification of the hemolytic anemias is presented in Table 1. This particular classification is favored because it emphasizes that intra- and extracorpuscular factors are both present in many instances.

The abnormalities listed under Intracorpuscular Defects are the congenital hemolytic anemias. The others are acquired.

TABLE 1

A Simplified Classification of Hemolysis

Intracorpuscular defects
- Abnormalities of membrane (hereditary spherocytosis, hereditary elliptocytosis, stomatocytosis, phospholipid defects)
- Abnormalities of hemoglobin (hemoglobinopathies, thalassemia syndromes, unstable hemoglobin hemolytic anemias, erythopoietic porphyria)
- Abnormalities of enzymes (pentose phosphate shunt, Embden-Meyerhof pathway, and nonglycolytic enzyme and substrate defects)

Extracorpuscular defects
- Immunohemolytic anemias (transfusion reactions, autoimmune hemolytic anemia, paroxysmal cold hemoglobinurias, drug-induced immunohemolytic anemia, hemolytic disease of the newborn)
- Nonimmune mechanisms (infectious agents, burns, drugs, associated with splenomegaly, mechanical, microangiopathic)

Interaction of intracorpuscular and extracorpuscular factors
- Paroxysmal nocturnal hemoglobinuria and complement
- G6PD deficiency and favism, oxidant drugs
- Heme synthesis and lead poisoning
- Ineffective erythropoiesis and vitamin B_{12} deficiency, folate deficiency
- Acanthocytosis and a-beta lipoproteinemia

From Miller, D. R.: The Laboratory Evaluation of Hemolysis, in Hematology for Internists, Weed, R. I., ed., Little, Brown, & Co., 1971 (by permission of author and publisher).

Heinz bodies are aggregations of denatured hemoglobin. The Heinz body anemias include those due to hemoglobin and enzyme abnormalities (congenital), and those due to oxidant drugs and lead poisoning (acquired). In many instances a mild enzyme deficiency, such as the common variety of G6PD deficiency seen in American blacks, is made symptomatic by exposure to oxidant drugs. Drugs in this category include quinine and its derivatives, sulfonamides, sulfones, various antibiotics, certain analgesics including aspirin, and various other drugs.[7]

The laboratory findings in hemolytic anemia reflect the degree of hemolysis and the site. If hemolysis is very mild, it may be reflected only in a decreased ^{51}Cr-labeled red cell survival time, elevation of the reticulocyte count, and marrow hyperplasia. Excess unconjugated bilirubin is formed in the reticulo-endothelial system from the breakdown of heme, but because the normal liver has considerable capacity to clear it, unconjugated hyperbilirubinemia may not be seen until hemolysis is fairly brisk. Urine and fecal urobilinogen will be elevated, however.

If intravascular hemolysis occurs, the hemoglobin liberated is bound by haptoglobin, which is subsequently cleared by the reticulo-endothelial system. The serum haptoglobin level accordingly falls. Other proteins, including albumin, may carry hemoglobin and its breakdown products. When hemolysis is severe enough to saturate these mechanisms, free hemoglobin is filtered through the glomerulus. The renal tubules can reabsorb some hemoglobin, resulting in the production of hemosiderin, which appears in the urine. Its presence is a sensitive indicator of intravascular hemolysis. Finally, when the resorptive capacity of the renal tubules is overcome, hemoglobinuria occurs.[8]

The Coombs' test is generally the key to the diagnosis of immune hemolytic anemia. Coombs' serum is prepared by immunizing rabbits with the protein sought, so that the rabbit serum contains antibodies against the suspect protein. Polyvalent serum or serum directed against one specific protein may be prepared. In the "gamma" Coombs' test, the serum is directed against IgG, whereas in the "nongamma" Coombs' test, it is directed against other proteins, such as IgM or the third component of complement (C3). This terminology may be confusing and it is probably better to simply identify the protein, i.e., IgG Coombs' test, C3 Coombs' test, etc.

The *direct* Coombs' test detects abnormal proteins on the surface of the red cells (Figure 1). The patient's washed red blood cells are reacted with Coombs' serum. If abnormal proteins

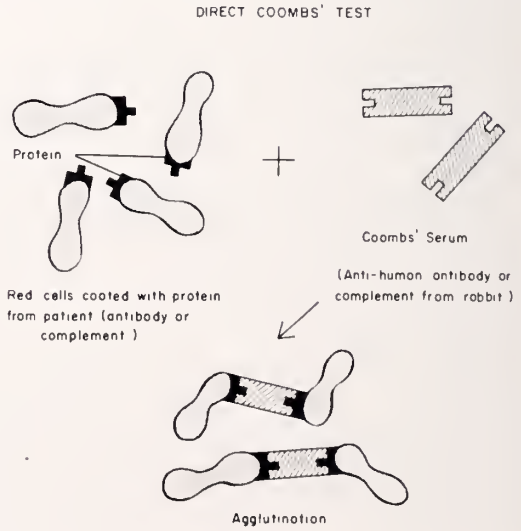

Figure 1.

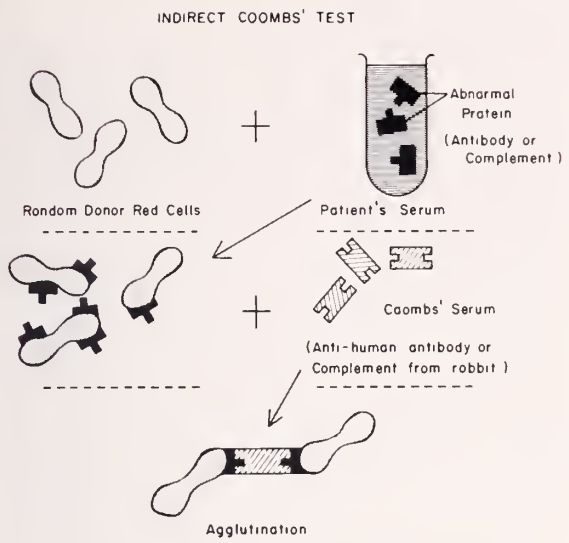

Figure 2.

against which the Coombs' serum is directed are present on the red cells, agglutination takes place.

The *indirect* Coombs' test detects abnormal proteins in the patient's serum. Normal red cells are incubated in the patient's serum, then separated and reacted with Coombs' serum. Again, agglutination indicates a positive test (Figure 2).

Additionally, IgM may be detected by reacting the patient's serum with normal red cells. If agglutination occurs at 37°C, a warm agglutinin is present; a cold agglutinin is present if agglutination takes place at a lower temperature.

Immune Hemolytic Anemias

Immune hemolysis is usually due to either IgG or IgM antibodies, but other classes of antibodies may cause hemolysis rarely. IgG antibodies may be either warm- or cold-reacting.

Warm-reacting IgG hemolysis may be idiopathic, as it is in 10 to 70 per cent of cases, depending on how enthusiastic the search is, or it may be secondary to systemic illness, including lymphoproliferative disorders, solid tumors, infection, connective tissue disease, and sarcoidosis.[9] Warm-reacting IgG antibodies attached to red cells have been observed *in vitro* to induce the formation of "rosettes" of red cells around monocytes (Figure 3).[10,11] It is postulated that *in vivo* similar adherence of red cells to splenic macrophages (the equivalent of monocytes) takes place, resulting in deformity of the red cells and destruction by the spleen. Complement is not activated by warm-reacting IgG, and thus no intravascular hemolysis takes place. Warm-reacting IgG antibodies are termed "incomplete" because they do not cause agglutination or complement fixation *in vitro*.[7]

In contrast, cold-reacting IgG antibodies are very efficient complement activators and produce marked intravascular hemolysis. The resulting syndrome is termed paroxysmal cold hemoglobinuria. It may be idiopathic, or it may be seen as a consequence of syphilis or viral infection.[8]

IgM antibodies are termed "cold agglutinins" because they cause agglutination *in vitro* at low temperatures. *In vivo*, hemolysis is produced by fixation of complement. Cold agglutinin syndromes may be idiopathic, most frequently in the elderly, or secondary to lymphoproliferative disorders. Hemolysis is usually mild and, as might be expected, Raynaud's phenomenon is frequently present. Various infections, particularly mononucleosis, may result in production of cold agglutinins, but frank hemolysis is infrequent.

In paroxysmal nocturnal hemoglobinuria two or more cell lines are present. One is normal and the others are unduly sensitive to the very low levels of complement activation which may be present in normal serum with consequent hemolysis. Acidification of serum and the addition of magnesium enhance complement activity and facilitate hemolysis. These facts are used as the basis for the Ham test, the specific diagnostic test for this disorder. The reason for increased hemolysis at night is not known. Antibodies are not involved, so this is not strictly an immune mechanism.[8]

Drug-Induced Immune Hemolysis

Drugs may produce immune hemolysis in a variety of ways. The "immune complex" mechanism was the first described as a consequence of

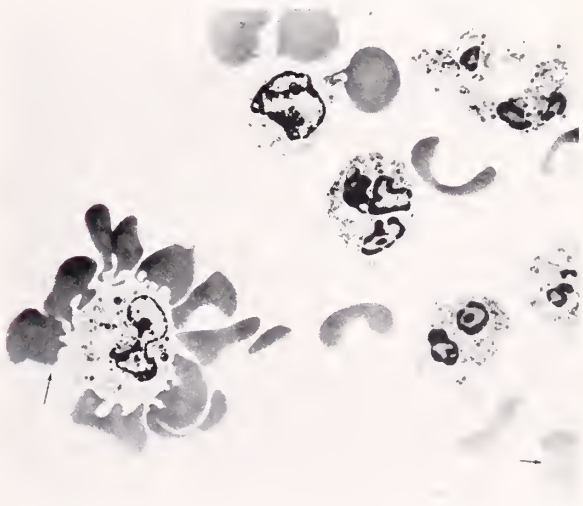

Figure 3. Electron micrograph of a preparation of white cells and anti-D-coated red cells. Note "rosette" in lower left with red cells bound to a monocyte. Neutrophils (to right) are devoid of red cells. Nonattached red cells are biconcave. The arrow (lower right) points to a finger-like monocyte projection. (From Abramson, et al: J. Exp. Med. 132:1191, 1970, by permission.)

Stibophen-induced hemolysis.[3] Quinine and its derivatives, analgesics including phenacetin and aminopyrine, INH, PAS, streptomycin, and tolbutamide and related compounds, are other agents which may produce hemolysis in this manner.[7] The reader will note that many of these drugs may also cause Heinz body hemolytic anemia.

Exactly what happens is poorly understood. Neither drug nor antibody is found on the red cell, but the Coombs' test with anticomplement serum is generally positive. The indirect complement Coombs' test becomes positive if the offending drug is added to the serum.[8]

Apparently an antigen-antibody combination ("immune complex") is formed in the serum. This complex causes activation of complement, complement is deposited on red cells, and hemolysis occurs. It is characteristically severe and intravascular. The antibody may be of either the IgG or IgM variety.

It is proposed that the drug, acting like a hapten, may associate with a soluble macromolecule in the serum, thus becoming antigenic. The red cell is damaged as an "innocent bystander."[12,13] An alternative hypothesis is that the drug makes a weak bond with a substance on the red cell and that this combination is the antigen.[15] Such a labile combination would be very weakly antigenic, which may explain the relative rarity of this variety of drug-induced hemolysis.

The hemolysis produced by penicillin and its derivatives differs in that penicillin binds firmly to the red cell. It is also a hapten, combining with substances on the surface to become antigenic. The IgG Coombs' test is strongly positive. The antibody is always IgG, and hemolysis occurs primarily in the spleen. High doses of penicillin are required to produce hemolysis, usually in excess of 20 million units a day for a week or more.[8,15]

The situation in alpha-methyldopa-induced immune hemolysis is different yet. In patients receiving alpha-methyldopa, Coombs' positivity occurs in 10 to 30 per cent, depending on dose.[6,16] A small number of these patients (0.3 per cent in one large series[6]) develop frank hemolysis after three or four months. Thus, Coombs' positivity alone does not warrant discontinuation of the drug. Typical warm-reactive IgG antibodies are produced which react with normal red cells in the absence of drug, quite unlike the other instances of drug-induced hemolysis. As in idiopathic IgG-induced warm-reactive hemolysis, the antibody is directed against the Rh "nucleus" substance,[17,18] and the principal site of hemolysis is the spleen. The antibody attaeks all red cells except those of the Rh_{null} type.

Three hypotheses to explain these phenomena have been advanced. LoBuglio and Jandl[15] have suggested that alpha-methyldopa so alters the Rh protein as to make it antigenic. Vyas *et al*[17] suggest, alternatively, that normal IgG is altered in such a way as to make it reactive with normal red cells, and they further suggest that this bound IgG may comprise part of the antigen. Finally, Dameshek[18] has proposed that alpha-methyldopa alters the immune mechanism in a manner to allow production of antibodies against "self." This hypothesis is supported by the increased incidence of other autoimmune phenomena in persons receiving alpha-methyldopa, including the presence of antinuclear antibodies, rheumatoid factor, and antibodies against the gastric mucosa.[20,21] Strictly speaking, alpha-methyldopa-induced hemolysis is allergic rather than truly autoimmune, because hemolysis ceases within two weeks after cessation of the drug.[8] The Coombs' positivity may persist for months, and if the patient is re-challenged with the drug, hemolysis recurs. Alpha-methyldopa has also been found to produce an immune thrombocytopenia, seemingly by the same mechanism.[22]

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Doctor Van Gilder's discussion of drug-induced immune hemolysis depicts the complexity of drug-red cell interactions. These disorders clearly stress the necessity of determining the etiology of anemia in a patient before rational therapy is possible. Physician awareness of these drug-induced hemolytic anemias coupled with a Coombs' test and drug history can lead to prompt and appropriate treatment, namely stopping the drug.

The patient presented had a Coombs'-positive hemolytic anemia with reticulocytosis and bone marrow erythroid hyperplasia. She had a warm-reacting IgG antibody with specificity for the Rh locus. As expected, her anemia abated with the discontinuation of the alpha-methyldopa.

Alpha-methyldopa induces antibody production with specificity for the Rh locus of the red cells. Once initiated, this antibody can cause a positive Coombs' test and hemolysis without the presence of the drug. Thus, it may mimic an idiopathic autoimmune hemolytic anemia if the drug history is not appreciated.

Our understanding of the actual mechanism by which red cells are hemolyzed has been enhanced in recent years. IgM molecules readily fix com-

plement to red cells and cause hemolysis. In addition IgM may agglutinate red cells and these red cell agglutinates may be sequestered in the spleen or liver with subsequent hemolysis.

Warm-reactive IgG-induced red cell destruction has been more recently clarified. Presumably, circulating IgG-coated red cells attach to splenic macrophages at specific receptor sites. These macrophages seem to siphon abnormal portions of the red cell membranes (i.e., antibody or complement-coated sites) into their cytoplasms. This loss of red cell membrane leads to deformity and a more spheroidal shape which predisposes the cell to destruction in the spleen.

S. V. Ramanan, M. D., Associate Professor of Medicine, Division of Hematology, West Virginia University Medical Center.

A most interesting aspect of this case is the patient's initial mode of presentation. The relatively short duration of symptoms suggests rapid development of anemia that resulted in the patient seeking medical attention. This rapid an onset is not characteristic of a dyshemopoietic anemia. With no evidence of blood loss detected, hemolysis remained the most likely pathogenetic mechanism.

While a hemolytic anemia may be suspected on clinical grounds, the possibility of autoimmune hemolysis merits serious consideration when there is difficulty cross-matching blood for transfusion. The first phenomenon that may be noted in the blood bank is spontaneous hemolysis, not only of the patient's red cells in his own plasma, but also of donor red cells when they are added to a sample of the patient's plasma. This situation indicates the presence of a red cell antibody in the patient's plasma, an antibody that needs to be identified for a successful crossmatch to be obtained. Where the degree of autoimmune hemolysis is less intense, no hemolysis may be discerned, but considerable difficulty may be experienced in the cross-matching. It is interesting that this second reason was responsible for the patient being referred to WVU Hospital.

As in the case of idiopathic thrombocytopenic purpura, an autoimmune hemolytic anemia may be regarded as being truly "idiopathic" only when an underlying disorder has been excluded after reasonable investigation. Of the disease states associated with autoimmune hemolysis, neoplastic disorders of the lymphoreticular system are among the more common.

Of great importance is the recognition of drug-induced hemolysis. As the clinical and hematologic features of idiopathic autoimmune hemolysis may be totally indistinguishable from the drug-induced disorder, it is self-evident that only a carefully taken history will yield the true etiologic cause. This is of more than theoretical importance. An idiopathic autoimmune hemolytic anemia that does not show response to steroid therapy may have to undergo a splenectomy, and failure to recognize drug-induced hemolysis may result in the patient being subjected to an unwarranted operation.

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Alcohol Itself Damages Liver

NEW studies have shown that alcohol itself damages the liver, regardless of nutrition, and alcoholics should not be led to believe that correction or prevention of nutritional deficiency will prevent liver damage in the face of continued alcohol abuse, according to a communication from the Council on Foods and Nutrition of the American Medical Association.

Traditionally, disorders of the liver have been attributed exclusively to nutritional deficiencies accompanying alcoholism, but it is now known that in addition to dietary deficiencies, alcohol itself can cause damage, states the report by Charles S. Lieber, M. D., of the Section and Laboratory of Liver Disease and Nutrition, Veterans Administration Hospital; and the Department of Medicine, Mt. Sinai School of Medicine of the City University of New York, Bronx, New York, on behalf of the AMA Council.

The alcoholic gets most of his nourishment in "empty" calories—lacking in vitamins, protein and minerals—from alcohol, and thus often is malnourished. Twenty ounces of 86-proof liquor represents about 1,500 calories, or one-half to two-thirds of the normal daily caloric requirement, Doctor Lieber points out. But the calories are lacking in nutrients.

Alcoholics often are treated with dietary supplements to correct, for example, anemia due to folate deficiency. But "independent of dietary deficiency, alcohol directly affects the hamatopoietic (blood forming) system." Alcohol exerts direct toxic effects on the liver and gut, resulting in structural alterations in the intestine and development of fatty liver, alcoholic hepatitis and cirrhosis.

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Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

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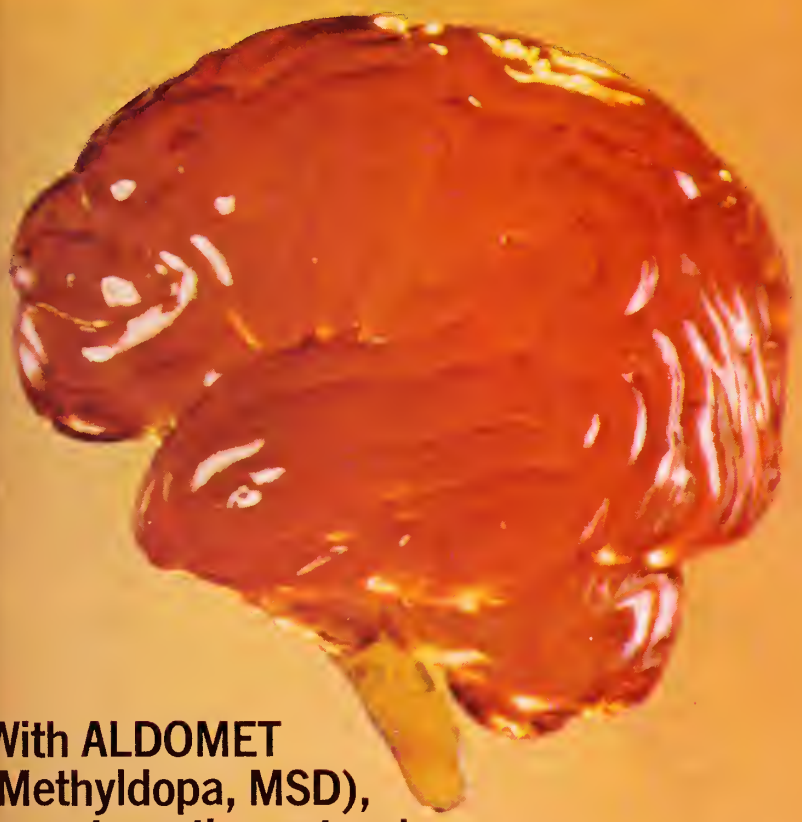

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(METHYLDOPA|MSD)

a unique antihypertensive agent

ALDOMET is contraindicated in active hepatic disease, hypersensitivity to the drug, and if previous methyldopa therapy has been associated with liver disorders. It is not recommended in pheochromocytoma.
It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. For more details see the brief summary of prescribing information.

MSD
MERCK SHARP & DOHME

For a brief summary of prescribing information, please see following page.

addendum

MSD
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to further simplify therapy for many patients

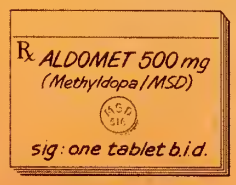
now available
ALDOMET® 500 mg
(METHYLDOPA|MSD)

- **often more practical to prescribe**
- **easier for patients to remember**

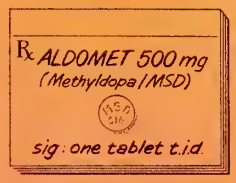
Now offered in addition to the standard 250-mg tablet, the new ALDOMET 500 mg tablet is a patient convenience. An especially important one, since in hypertension convenience of the dosage schedule is one factor that can make the difference in compliance of the patient. The minimum daily dose of ALDOMET is 250 mg b.i.d. The usual starting dose is 250 mg t.i.d. Dosage is adjusted as necessary by adding or deleting 250 mg or 500 mg at intervals of not less than two days. The maximum dose is 3.0 g per day.

Examples of b.i.d. or t.i.d. dosage convenience provided by ALDOMET 500 mg within the usual daily dosage range of 500 mg to 2.0 g:

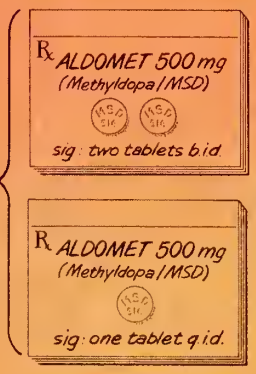
1.0-g daily dose =



1.5-g daily dose =



2.0-g daily dose =



NOTE: Tablets shown are not actual size.

in hypertension

ALDOMET® (METHYLDOPA|MSD)

usually lowers blood pressure effectively

Contraindications: Active hepatic disease, such as acute hepatitis and active cirrhosis; if previous methyldopa therapy has been associated with liver disorders (see Warnings); hypersensitivity

Warnings: It is important to recognize that a positive Coombs test, hemolytic anemia, and liver disorders may occur with methyldopa therapy. The rare occurrences of hemolytic anemia or liver disorders could lead to potentially fatal complications unless properly recognized and managed. Read this section carefully to understand these reactions.

With prolonged methyldopa therapy, 10% to 20% of patients develop a positive direct Coombs test, usually between 6 and 12 months of therapy Lowest incidence is at daily dosage of 1 g or less. This on rare occasions may be associated with hemolytic anemia, which could lead to potentially fatal complications. One cannot predict which patients with a positive direct Coombs test may develop hemolytic anemia. Prior existence or development of a positive direct Coombs test is not in itself a contraindication to use of methyldopa If a positive Coombs test develops during methyldopa therapy, determine whether hemolytic anemia exists and whether the positive Coombs test may be a problem. For example, in addition to a positive direct Coombs test there is less often a positive indirect Coombs test which may interfere with cross matching of blood

At the start of methyldopa therapy, it is desirable to do a blood count (hematocrit, hemoglobin, or red cell count) for a baseline or to establish whether there is anemia Periodic blood counts should be done during therapy to detect hemolytic anemia. It may be useful to do a direct Coombs test before therapy and at 6 and 12 months after the start of therapy. If Coombs-positive hemolytic anemia occurs, the cause may be methyldopa and the drug should be discontinued Usually the anemia remits promptly If not, corticosteroids may be given and other causes of anemia should be considered If the hemolytic anemia is related to methyldopa, the drug should not be reinstituted When methyldopa causes Coombs positivity alone or with hemolytic anemia, the red cell is usually coated with gamma globulin of the IgG (gamma G) class only The positive Coombs test may not revert to normal until weeks to months after methyldopa is stopped

Should the need for transfusion arise in a patient receiving methyldopa, both a direct and an indirect Coombs test should be performed on his blood In the absence of hemolytic anemia, usually only the direct Coombs test will be positive A positive direct Coombs test alone will not interfere with typing or cross matching If the indirect Coombs test is also positive, problems may arise in the major cross match and the assistance of a hematologist or transfusion expert will be needed.

Fever has occurred within first 3 weeks of therapy, sometimes with eosinophilia or abnormalities in liver function tests, such as serum alkaline phosphatase, serum transaminases (SGOT, SGPT), bilirubin, cephalin cholesterol flocculation, prothrombin time, and bromsulphalein retention. Jaundice, with or without fever, may occur, with onset usually in the first 2 to 3 months of therapy In some patients the findings are consistent with those of cholestasis. Rarely fatal hepatic necrosis has been reported. These hepatic changes may represent hypersensitivity reactions; periodic determination of hepatic function should be done particularly during the first 6 to 12 weeks of therapy or whenever an unexplained fever occurs. If fever and abnormalities in liver function tests or jaundice appear, stop therapy with methyldopa. If caused by methyldopa, the temperature and abnormalities in liver function characteristically have reverted to normal when the drug was discontinued. Methyldopa should not be reinstituted in such patients.

Rarely, a reversible reduction of the white blood cell count with primary effect on granulocytes has been seen. Reversible thrombocytopenia has occurred rarely When used with other antihypertensive drugs, potentiation of antihypertensive effect may occur. Patients should be followed carefully to detect side reactions or unusual manifestations of drug idiosyncrasy

Use in Pregnancy: Use of any drug in women who are or may become pregnant requires that anticipated benefits be weighed against possible risks; possibility of fetal injury can not be excluded.

Precautions: Should be used with caution in patients with history of previous liver disease or dysfunction (see Warnings). May interfere with measurement of uric acid by the phosphotungstate method, creatinine by the alkaline picrate method, and SGOT by colorimetric methods Since methyldopa causes fluorescence in urine samples at the same wavelengths as catecholamines, falsely high levels of urinary catecholamines may be reported This will interfere with the diagnosis of pheochromocytoma It is important to recognize this phenomenon before a patient with a possible pheochromocytoma is subjected to surgery Methyldopa is not recommended for patients with pheochromocytoma Urine exposed to air after voiding may darken because of breakdown of methyldopa or its metabolites

Stop drug if involuntary choreoathetotic movement occur in patients with severe bilateral cerebrovascular disease. Patients may require reduced doses of anesthetics; hypotension occurring during anesthesia usually can be controlled with vasopressors Hypertension has recurred after dialysis in patients on methyldopa because the drug is removed by the procedure.

Adverse Reactions: *Central nervous system:* Sedation, headache, asthenia or weakness, usually early and transient; dizziness, lightheadedness, symptoms of cerebrovascular insufficiency, paresthesias, parkinsonism, Bell's palsy, decreased mental acuity, involuntary choreoathetotic movements; psychic disturbances, including nightmares and reversible mild psychoses or depression.

Cardiovascular: Bradycardia, aggravation of angina pectoris. Orthostatic hypotension (decrease daily dosage). Edema (and weight gain) usually relieved by use of a diuretic. (Discontinue methyldopa if edema progresses or signs of heart failure appear.

Gastrointestinal: Nausea, vomiting, distention, constipation, flatus, diarrhea, mild dryness of mouth, sore or "black" tongue, pancreatitis, sialadenitis.

Hepatic: Abnormal liver function tests, jaundice, liver disorders.

Hematologic: Positive Coombs test, hemolytic anemia. Leukopenia, granulocytopenia, thrombocytopenia.

Allergic: Drug-related fever, myocarditis.

Other: Nasal stuffiness, rise in BUN, breast enlargement, gynecomastia, lactation, impotence, decreased libido, dermatologic reactions including eczema and lichenoid eruptions, mild arthralgia, myalgia.

Note: Initial adult dosage should be limited to 500 mg daily when given with antihypertensives other than thiazides. Tolerance may occur, usually between second and third month of therapy; increased dosage or adding a thiazide frequently restores effective control. Patients with impaired renal function may respond to smaller doses. Syncope in older patients may be related to increased sensitivity and advanced arteriosclerotic vascular disease; this may be avoided by lower doses.

How Supplied: Tablets, containing 125 mg methyldopa each, in bottles of 100; Tablets, containing 250 mg methyldopa each, in single-unit packages of 100 and bottles of 100 and 1000. Tablets, containing 500 mg methyldopa each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

A Continuing Medical Education Event!

The Ninth Mid-Winter Clinical Conference

Daniel Boone Hotel
Washington and Capitol Streets
Charleston, West Virginia

January 30 - February 1

Such sponsors and participants as the West Virginia State Medical Association; American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia Chapter, American Academy of Family Physicians; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; Section on Orthopedic Surgery, West Virginia State Medical Association; and West Virginia Chapter, American Academy of Pediatrics.

Watch The Journal For Program Details

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

FOR ADVANCE REGISTRATION, please complete the form below and mail to: WEST VIRGINIA STATE MEDICAL ASSOCIATION, P. O. BOX 1031, CHARLESTON, W. VA. 25324.

- -

Please register me for the Ninth Mid-Winter Clinical Conference in Charleston, W. Va., January 30-February 1, 1976. My $15 registration fee is (is not) enclosed.

I will attend sessions at 2 P. M. Friday, January 30 ..... 8 P. M. Friday .....

9:30 A. M. Saturday, January 31 ..... 2 P. M. Saturday ..... 9:30 A. M. Sunday, February 1 ..... All sessions .....

Name (please print) ..... *Specialty* .....

Address ..... *City* .....

A message from . . .

The President

PLAY IT AGAIN, SAM - - -

SEEMINGLY there is no paper shortage in Washington, D. C., as our Federal bureaucrats continue to print reams of dictates, mandates and regulations relative to the health of the nation. These same Federal health bureaucrats have exhibited a remarkable track record of inefficiency, ineptitude, ineffectiveness and inconsistency, which is epitomized in Public Law 93-641 (the National Health Planning and Resources Development Act of 1974), a measure passed in the last 45 minutes of the 93rd Congress. This act was passed contrary to the advice of a large number of health related institutions and organizations, including the AMA and state medical associations, such as our own. Although plans for implementation of this enactment are under way, our efforts for survival via the medical-legal route must take precedence.

The impact of laws and legal processes upon medical practice has embroiled both professions, the insurance complex, the courts and the public in a very somber dilemma.

With our basic professional liability policy renewal date looming over the horizon, it is mandatory that this crisis be solved. A unified, coordinated approach is absolutely necessary if legislation is to be passed by January, 1978. Your officers, councilors and committeemen are diligently working on this project. Successful legislation will depend upon input from our entire Association at the appropriate time.

Fortunately, and in the tradition of the Republic, the states retained, via the Bill of Rights, the powers to solve problems at the state level. Our state legislatures have this power and hopefully, with our Federation's concurrence, our state legislatures will act promptly to solve the medical-legal dilemma. They must resolve the problem before elective health care comes to a standstill, emergency care is restricted or lost, and members of both the legal and medical professions are forced into Federally structured practice patterns of neither their design, making, needs nor wishes.

Will our Bicentennial year usher in the erosion or abolition of the freedom to practice one's profession? I trust not, I pray not, ever - - -

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

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EDITORIALS

LONGEVITY OF MIGRAINE PATIENTS

Presumably several million people in the United States suffer from some type of migraine. It is a condition which interests or should interest every practicing physician. An informative article appeared in the July, 1974, issue of *Neurology*, by Levington, et al,[1] concerning vascular diseases, mortality and migraine in the parents of migraine patients. A retrospective cohort study of middle aged and elderly parents of migraine patients was carried out to determine if the latter are at increased risk of certain vascular diseases. The study was confined to migraine patients who had one parent with and one without migraine. Parents with migraine were compared to parents without migraine of the same sex in narrow age groups.

The data were obtained from records of migraine patients seen by members of the Headache Association of Boston during the years 1962 to 1971. The authors point out the many difficulties in making this type of study, such as the diagnosis of migraine, what actually constitutes high blood pressure, and the fact that people with migraine often seek medical aid, and their blood pressure is determined. On the other hand, many people who do not have migraine do not go to a physician, and may have had a high blood pressure for a long time.

Despite these numerous difficulties, the authors obtained some interesting and worthwhile data. Among them were: (1) the frequency of high blood pressure was established to be 1.7 (or 70 per cent) greater with migraine than in people without migraine ($p < 0.05$); (2) people with migraine are not at increased risk of stroke; (3) the increased rate of heart attack for people with migraine is more evident below the age of 70; and (4) for each sex, people with migraine tend to die at younger ages than people without migraine.

The authors list the following possible explanations for a true relationship between migraine and potentially fatal vascular diseases: (1) common genetic features, (2) common psychologic features, (3) shared aberrations of indoleamine or catecholamine metabolism, (4) adverse effects of therapy for migraine, and (5) common disturbances of vascular reactivity.

The findings listed by the authors are not good news to patients afflicted with migraine because not much can be done for them from a medical standpoint, except, of course, elevated blood pressure can generally be controlled by antihypertensive medication. The article ends on a rather encouraging note, however, when it quotes Mantel and Haensel,[2] "A single retrospective

1. Levington, A., et al: Neurology. 24: 669, 1974.
2. Mantel, N., and Haensel, W. J.: Natl. Cancer Inst. 22: 719, 1959.

study does not yield conclusions, only leads." This is a happy ending and should assuage, in part, at least, the worry of many patients who are afflicted with the curse of migraine.

WILLIAM S. MIDDLETON, M. D., 1890-1975

William Shainline Middleton, M. D., an eminent clinician, medical educator, and medical administrator, known to many physicians in West Virginia, died in Madison, Wisconsin, on September 9 at the age of 85. William Middleton received his M.D. degree from the University of Pennsylvania in 1911 at the age of 21. He entered the University directly following graduation from high school, because at that time no preparatory college work was required for entrance into the School of Medicine of the University of Pennsylvania. He served an internship for one year at the Philadelphia General Hospital.

Following his internship, he accepted a position as Instructor in Clinical Medicine at the University of Wisconsin, which was then a two-year school. His outstanding ability was recognized and, in 1933, he became Professor of Medicine and, in 1935, Dean of the School of Medicine. He held the latter position until 1960.

During World War I he served as a Captain in the medical corps in both the British and American Expeditionary Forces and, in World War II, as a Colonel in the medical corps. From 1942 to 1945, he was Chief Consultant for the European Theater of Operations. He was Chief Medical Director of the Veterans Administration from 1955 to 1963, serving with distinction in this difficult post.

Doctor Middleton received many honors in recognition of his meritorious services; among them were an honorary Sc.D. degree from Cambridge University in England, a similar degree from the University of Pennsylvania, and honorary memberships in the Royal Society of Medicine, Order of the British Empire, and the Croix de Guerre with Palms.

At the time of the development of the Medical Center at West Virginia University, Doctor Middleton served as an expert consulant and made a number of visits to Morgantown and to our annual meetings of the West Virginia State Medical Association. He was endowed with many splendid talents, and wrote well and spoke fluently, always without a manuscript. Doctor Middleton had a warm personality, an enthusiasm which was contagious, and a host of friends in the profession, among them many physicians in West Virginia. In his death the country has lost a brilliant clinician, a superb medical educator and administrator, and an outstanding personality. It will be indeed a long time, if ever, before his equal will be seen in this country.

MID-WINTER CONFERENCE IN TUNE WITH THE TIMES

Just a few years ago, the Mid-Winter Clinical Conference was a Sunday afternoon program concerned with diseases of the chest. Now it ranks as a major continuing medical education event for West Virginia physicians, and it seems to get bigger and bigger each January.

The general news section of this issue of *The Journal* carries another story, listing half a dozen additional speakers and topics, about the ninth Conference coming up January 30-February 1, 1976.

It's hardly surprising, when one takes a sober overall look at the demands, challenges and frustrations enveloping medical practice today, that the Clinical Conference has assumed the stature it enjoys.

Continuing medical education is the order of the day, everywhere. At West Virginia University, solid efforts are being made to fashion a program that can gain American Medical Association accreditation. Accelerated development of a program of loss control and education is a must as a vital part of the West Virginia State Medical Association-Aetna Life and Casualty Professional Liability Insurance Program for the State's physicians.

On the broader horizon, legislatures in Ohio, Michigan and Wisconsin have enacted this year the first state laws mandating continuing medical education for physicians. A 1975 State of Washington statute grants the board of medical examiners permissive authority to require CME for doctors. Before this year, lawmakers in Kansas, Maryland and New Mexico passed statutes permitting state boards of medical examiners to require certain numbers of hours of CME credit; and boards in New Mexico and Maryland have issued regulations actually imposing the CME requirements.

Approximately a year from now, 1,700 Diplomates of the American Board of Family Practice will take the first mandatory recertification examination in the history of American medicine. They will complete a half-day written examination, and each will review 20 of his own patient charts and submit answers to a set of questions about them.

GENERAL NEWS

New Topics, Speakers Announced For Mid-Winter Conference

Four additional speakers have been announced by the Program Committee for the Ninth Mid-Winter Clinical Conference to be held in Charleston next January 30, 31 and February 1.

The continuing education program will be held at the Daniel Boone Hotel, beginning at 2 P. M. on Friday, January 30, and continuing through noon on Sunday, February 1. The conference is sponsored by the State Medical Association in conjunction with other medical groups and voluntary health agencies.

Scientific sessions will be held Friday afternoon, Saturday morning and afternoon, and Sunday morning. The speakers and their topics currently being announced are:

"Office Otolaryngology"— Philip M. Sprinkle, M. D., Professor and Chairman, Division of Otolaryngology, West Virginia University School of Medicine (Saturday afternoon);

"Prevention and Treatment of Undue Hyperglycemia and Ketosis"—Thaddeus S. Danowski, M. D., Director of Medicine and Director, Institute of Graduate Medicine, Shadyside Hospital, Pittsburgh (Saturday afternoon);

"The Surgical Approach to the Acute Abdomen" —Donald E. McDowell, M. D., Chief of Surgery, Veterans Administration Hospital, Clarksburg (Friday afternoon);

"Office Urology"—D. Franklin Milam, M. D., Professor of Surgery and Chairman, Division of Urology, WVU (Sunday morning).

Philip M. Sprinkle, M. D.

Thaddeus S. Danowski, M. D.

It was announced previously that Drs. Herman K. Goldberg of Baltimore and Peyton E. Weary of Charlottesville, Virginia, would be conference speakers. Doctor Goldberg, a Baltimore ophthalmologist, will speak on "Dyslexia and the Hyperactive Child" at a public session Friday evening at 8 o'clock, and will address the same topic at a physicians' session Saturday morning, January 31. Doctor Weary, Professor of Dermatology at the University of Virginia Medical Center, will speak on "Office Dermatology" Saturday afternoon.

It also was announced that Dr. James H. Sammons, Executive Vice President of the American Medical Association, will be a special guest speaker at a physicians' session to be held Friday evening concurrently with the public session.

Herman K. Goldberg, M. D.

Doctor Goldberg is Chief of Ophthalmology at Sinai Hospital in Baltimore and Associate Professor of Pediatrics and Ophthalmology at Johns Hopkins Hospital in that city. Certified by the American Board of Ophthalmology and the American Academy of Ophthalmology, Doctor Goldberg received his M. D. degree in 1936 from Johns Hopkins University School of Medicine. He served his internship and residencies in ophthalmology at the Wilmer Institute (at Johns Hokpins Hospital) and Baltimore City Hospital.

Doctor Goldberg is a representative of the American Association of Ophthalmology before the Presidential Commission on Dyslexia. He has been a guest lecturer at the American Academy of Ophthalmology on learning disabilities for the past 10 years. He has written more than 40 scientific articles, most of them concerning ocular surgery and the physiology of vision and learning disabilities. Doctor Goldberg also is the author of a book on dyslexia and learning disabilities.

Philip M. Sprinkle, M. D.

Doctor Sprinkle, who served as Program Chairman for the State Medical Association's 1975 Annual Meeting, was born in Greensboro, North Carolina, and received his secondary education in Martinsville, Virginia. He is certified by the American Board of Otolaryngology and the American College of Surgeons.

Doctor Sprinkle attended Bridgewater (Va.) College for one year, served with the U. S. Air Force for two years, then completed his undergraduate education at the University of Virginia. He

received his M. D. degree in 1953 from the University of Virginia Medical School. He served a rotating internship at Virginia Mason Hospital in Seattle, Washington, and then was in family practice from 1954 to 1960 in Martinsville, Virginia. He served a residency in general surgery at Watts Hospital in Durham, North Carolina, in 1960-61, and a residency in otolaryngology at the University of Virginia Hospital, 1961-64.

Doctor Sprinkle, a Past President of the West Virginia Academy of Ophthalmology and Otolaryngology, is a member of the Board of Directors of the American Academy of Facial, Plastic and Reconstructive Surgery, and is an Instructor in the American Academy of Otolaryngology. He is the author or co-author of more than 45 scientific publications.

Thaddeus S. Danowski, M. D.

In addition to his other current staff appointments noted above, Doctor Danowski is Clinical Professor of Medicine at the University of Pittsburgh School of Medicine, and is a member of the teaching staff at St. Margaret's Memorial Hospital in Pittsburgh. He is a Diplomate of the National Board of Medical Examiners and is certified by the American Board of Internal Medicine.

Doctor Danowski was graduated from Yale University and received his M. D. degree in 1940 from the Yale University School of Medicine. He served his internship and residency in medicine at New Haven (Conn.) Hospital. He was Professor of Medicine at the University of Pittsburgh from 1956 to 1973.

He was President of the American Diabetes Association in 1965-66, and continues to serve on several of the Association's committees. Among a number of other past and present appointments held by Doctor Danowski are those of President, American Cancer Society, Pennsylvania Division (1961-62); Chairman, Endocrinology and Metabolism Advisory Committee, Federal Food and Drug Administration (1971-74); Advisory Panel on Endocrinology, United States Pharmacopeia; Chairman, Metabolism Study Section, Health Research and Services Foundation; and House of Delegates, American Cancer Society.

Doctor Danowski also is a member of the editorial boards of a number of scientific journals, including *Diabetes, Metabolism, Clinical Pharmacology and Therapeutics, Medcom,* and *Chronic Disease*. He is a Fellow of the American Association for the Advancement of Science, American College of Clinical Pharmacology, American College of Physicians, American Diabetes Association, American Heart Association (Council on Arteriosclerosis), International College of Angiology, Royal Society of Health, and Royal Society of Medicine.

Donald E. McDowell, M. D.

Prior to his present position, Doctor McDowell, a native of Maryland, served as a medical missionary to Paraguay under the Southern Baptist Foreign Mission Board, beginning in 1954. In Paraguay, he was Chief of Surgical Service at the Baptist Hospital in Asuncion, serving as Director of the hospital from 1972 to 1974. He was Chief of the U. S. Government Health Mission to Paraguay from 1951 to 1953.

Doctor McDowell received his secondary education in Calvert, Maryland, and was graduated from Wheaton (Ill.) College. He received his M. D. degree in 1947 from the Temple University School of Medicine. He served his internship in New York City, a residency in general surgery at the Veterans Administration hospitals of that city, a residency in thoracic and cardiovascular surgery at Episcopal Hospital in Philadelphia, a residency in thoracic and cardiovascular surgery at Presbyterian—University of Pennsylvania Medical Center in Philadelphia, and a residency in neurosurgery at the University of Virginia. He is a Diplomate of the American Board of Surgery and the Board of Thoracic Surgery.

Doctor McDowell has conducted research in the fields of pulmonary arterio-venous fistulae, aortic aneurysms, mitral valve insufficiency, and hypothermia for cerebral surgery. He is a Fellow of the American College of Surgeons and a member of the Southern Thoracic Surgical Association and the Circulo Medico Paraguay. He is the author or co-author of 11 scientific publications.

D. Franklin Milam, M. D.

Doctor Milam, a native of Sissonville, served as President of the State Medical Association's Section on Urology from 1965 through 1968. He currently is Chairman of the Section on Urology of the Southern Medical Association and was President of the Mid-Atlantic Section of the American Urological Association in 1969-70.

Doctor Milam has held his present position as Professor of Surgery and Chairman, Division of Urology, at the West Virginia University School of Medicine since 1963, having come to WVU in 1960 as Associate Professor and Chairman of the Division of Urology. He is a Diplomate of the American Board of Urology, Inc.

Donald E. McDowell, M. D.

D. Franklin Milam, M. D.

Kanawha Medical Society Offers Social Event

Physicians, wives and others attending the Mid-Winter Clinical Conference are invited to the annual dinner dance of the Kanawha Medical Society which will be held Saurday, January 31, in the Daniel Boone Hotel ballroom beginning at 7 P. M. The affair will include cocktails, dinner and dancing. Dress will be formal.

The cost will be $15 per person. Advance registration is requested. Registrations and advance payment, if desired, should be sent to the Kanawha Medical Society, 405 Atlas Building, Charleston 25301. Payment also may be made at the door. Checks should be made payable to the Kanawha Medical Society.

All registrations should be in by January 27.

Doctor Milam was graduated from WVU and the former WVU two-year medical school, receiving his M. D. degree in 1944 from the University of Pennsylvania School of Medicine. He served his internship and residencies in urology at that institution before going to Creighton University School of Medicine in Omaha, Nebraska, in 1950. He held various teaching and hospital appointments there until 1954, when he established a private practice in urology in Charleston. He was Chief of Urology at the former Charleston General Hospital from 1957 to 1960.

Doctor Milam is a Fellow of the American College of Surgeons, and a member of the International Society of Urology and the American Urological Association. He is a former member of the Scientific Exhibits, Education, and Nominating committees of the latter association. He has been an exhibitor or co-exhibitor for seven scientific exhibits, the author of 76 scientific papers, and the author or co-author of 56 scientific publications. He also has collaborated with two other physicians in the production of a scientific film, "Trigono-Colo Cutaneous Urinary Diversion."

Other Conference Information

Serving on the Program Committee are Drs. Joseph T. Skaggs and Ralph H. Nestmann of Charleston, Co-Chairmen, and Drs. William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

Attendance at the conference will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the conference also is expected to carry prescribed credit by the American Academy of Family Physicians.

A registration fee of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents.

Further details, including additional conference speakers, will be provided in later issues of *The Journal* as the program is completed.

Seminar Planned On Evaluation Of Work-Related Injuries

The West Virginia State Medical Association will join with Gov. Arch A. Moore, Jr., and the West Virginia Workmen's Compensation Fund in sponsorship of a half-day seminar in Charleston next January 29 on the medical profession's role in evaluation of work-related injuries and occupational diseases.

Workmen's Compensation Commissioner B. Frederick Becker said that Raymond M. McKeown, M. D., of North Bend, Oregon, a recognized authority and writer on the socioeconomics of medicine, will be the principal speaker for the 1 P. M. program at the Daniel Boone Hotel.

Raymond M. McKeown, M. D.

The seminar, to deal particularly with the rating of mental and physical impairment, will be on the date immediately preceding opening sessions of the Ninth Mid-Winter Clinical Conference, also to be held at the Daniel Boone Hotel on January 30-February 1.

Commissioner Becker has expressed a desire for more physicians participating in the State's compensation program examination and evaluation procedures, and made a specific plea for such increased involvement at the Medical Association Council's meeting August 20 at The Greenbrier in White Sulphur Springs.

Doctor McKeown, who holds an A. B. degree from the University of Oregon, is an honor graduate of the University of Toronto, Canada, School of Medicine, with postgraduate work at Yale University's School of Medicine. He was a Davis and Geck Research Fellow in surgery during a portion of his time at Yale.

He has published more than 30 papers on fractures and bone healing experiments, a book on guides to the evaluation of permanent impairment, and has worked with the National Aeronautics and Space Administration with regard to the loss of skeletal minerals in space.

Doctor McKeown was a Trustee of the American Medical Association for nine years; and has served

as the AMA's Secretary-Treasurer, as well as President of the AMA Research and Educational Foundation.

Commissioner Becker said that Doctor McKeown's presentation on standards for determining impairment will be followed by a question-and-answer period. The seminar then will be concluded with a discussion on "Why Isn't It That Easy: Practical Problems in Evaluating Impairment," with Doctor McKeown, Dr. Carl J. Roncaglione and Dr. Joseph P. Seltzer, both of Charleston, and Michael R. Crane, staff attorney for the Compensation Fund, serving as panelists.

Children's Home Society Offers Wide Range of Services

Physicians providing medical care for young women experiencing unwanted pregnancies can turn to The Children's Home Society of West Virginia for a variety of services for their patients.

The Society is "a private, non-profit social agency with specialized, comprehensive services including counseling, help in arranging maternity home care, temporary foster care, and adoptive placements," Mrs. Malmarie Sulek, its Executive Director, has explained.

The Society is licensed by the State as a child placement agency and is accredited by the Child Welfare League of America. In some instances, The Children's Home Society provides financial payments on behalf of the prospective mother to help with the cost of medical care, maternity home care, and/or foster home care.

Referrals by physicians are encouraged. Information is available from the main office in Charleston, P. O. Box 2942, 1118 Kanawha Boulevard, Charleston 25330, telephone (304) 346-0795; or at these branch offices: 203 Monongahela Building, Morgantown 26505, telephone (304) 296-4796; or First Tyler Bank Building, Sistersville 26175, telephone (304) 657-2800.

Applications For Heart Assn. Grants Being Accepted

The American Heart Association, West Virginia Affiliate, currently is accepting applications requesting grants-in-aid for research in the field of cardiovascular disease.

Grants are not restricted to any particular discipline, although the investigator must, of course, be qualified and must have available facilities to pursue his investigation. Since funds are limited, individual requests for grants should not exceed $4,000. Each application will be evaluated by the Research Committee, and awards will be based on merit, needs and available funds.

All requests for research grants-in-aid should be submitted by March 1, 1976, the final deadline for applications.

Persons interested in applying should write to the following address to secure application blanks and more detailed information:

Charles Sikorski, Executive Director, American Heart Association, West Virginia Affiliate, 211 Thirty-Fifth Street, S. E., Charleston 25304 (telephone (304) 346-5381).

State Physicians To Participate In SMA's Annual Meeting

A number of West Virginia physicians will attend the 69th Annual Meeting of the Southern Medical Association to be held November 16-19, in Miami Beach, at the Hotel Fountainbleau.

Dr. D. Franklin Milam of Morgantown is Chairman of the SMA's Section on Urology, and will preside at its meeting during the morning of Monday, November 17. He also will speak on his visit to Russia. Doctor Milam is Professor of Surgery and Chairman, Division of Urology, at the West Virginia University School of Medicine.

Dr. Jack Leckie of Huntington, who is President of the State Medical Association, is Chairman of the SMA's Section on Family Practice. He will preside at the section meeting Tuesday afternoon, November 18. Dr. William L. Neal, also of Huntington, is Vice Chairman of the section.

Dr. Vicente Anido of Morgantown will present a scientific paper on "Blastic Crisis in Four Patients with Chronic Lymphocytic Leukemia" during a meeting of the Section on Pathology Monday morning. Doctor Anido is Professor of Clinical Pathology at WVU, and also is President of the West Virginia Association of Pathologists.

Dr. M. Bruce Martin of Huntington is a member of the SMA's Council.

Thomas F. Mann of Lewisburg, a junior at the WVU School of Medicine, will be one of the medical student representatives to the SMA meeting.

More than 6,000 physicians and medical professionals are expected to attend the four-day meeting. The exclusive purpose of the SMA is to develop and foster scientific medicine; it is composed of more than 22,000 physician members from 16 southern states and the District of Columbia.

New FLEX Preparatory Course Scheduled Jan. 6—June 11

The University of Miami, Florida, has been awarded a Federal contract to develop and administer a preparatory course for the Federation Licensing Examination (FLEX). The course, to run about six months, will begin January 6 and continue through June 11, 1976.

Federal officials in Washington said that instruction will be provided under the direction of Dr.

Rafael Penlaver, Office of International Medical Education, University of Miami School of Medicine, in Miami.

The FLEX Preparatory Course is open to physicians serving on temporary, partial or institutional licenses or permits to practice medicine, including medical licensure for area of need and public employees. These physicians must be employed in county, municipal, state, other public or private hospitals, nursing homes, or in a designated area of need in any single state or group of two or more states, who are not in training programs approved by the Council on Medical Education of the American Medical Association.

Only bona fide refugee physicians who are in the United States on refugee visas will be exempt from the requirements of employment and licensure as stated above. This course is not open to any individual in the United States on any non-immigrant visa, e.g., H or J visa.

The Educational Commission for Foreign Medical Graduates (ECFMG) has been designated to identify the pool of potential candidates and to select individuals to participate in the course.

All eligible individuals interested in applying for the FLEX Preparatory Course should request an application form in writing. Address all correspondence to: Angelo P. Angelides, M. D., Director of Research & Development, ECFMG, 3624 Market Street, Philadelphia, Pennsylvania 19104.

Dr. Leckie Completes Appointment Of Association Committees

Here are the remaining two committees which have been named by Dr. Jack Leckie of Huntington, President of the West Virginia State Medical Association, to function during his one-year term of office. Doctor Leckie's other committee appointments were announced in the October issue of *The Journal*.

Medical Economics

Carl J. Roncaglione, Charleston, Chairman; and W. Alva Deardorff, Charleston, Vice Chairman.

Sub-Committees

Federal Medical Activities: J. Hugh Wiley, Morgantown, Chairman; K. Douglas Bowers, Jr., Morgantown; George R. Callender, Jr., Charleston; Everett S. Fogle, Martinsburg; Richard V. Lynch, Jr., Morgantown; J. L. Mangus, Charleston; and James T. Spencer, Charleston.

State Workmen's Compensation: Lawrance S. Miller, Morgantown, Chairman; James C. Bosley, Piedmont; Marshall J. Carper, South Charleston; Jacques Charbonniez, Charleston; Robert L. Ghiz, Charleston; Charles E. Haislip, Fairmont; Thomas J. Holbrook, Huntington; James T. Hughes, Ripley; and James E. Powers, Princeton.

Blue Cross - Blue Shield Third Party: Milton J. Lilly, Jr., Charleston, Chairman; Robert W. Bess, Jr., Piedmont; Donald R. Chadwick, Beckley; Cordell de la Pena, Clarksburg; Ernest G. Guy, Philippi; C. A. Hoffman, Huntington; John F. Otto, Jr., Huntington; Richard C. Rashid, South Charleston; and Harry S. Weeks, Jr., Wheeling.

Public Welfare—Joint Conference Committee: John B. Markey, Charleston, Chairman; Clemente Diaz, Richwood; Richard E. Flood, Weirton; Lewis N. Fox, MacArthur; William H. Harriman, Jr., Terra Alta; W. Gene Klingberg, Morgantown; Thomas P. Long, Man; Seigle W. Parks, Charleston; and Hiram Sizemore, Jr., Shepherdstown.

United Mine Workers Welfare and Retirement Fund: Edward Jackson, St. Albans, Chairman; Arthur A. Carr, Welch; C. Richard Daniel, Beckley; Wirt Lee Davis, Charleston; John M. Hartman, Charleston; Murray B. Hunter, Fairmont; and Ray M. Kessel, Logan.

Vocational Rehabilitation: Robert L. Ghiz, Charleston, Chairman; Charles E. Andrews, Morgantown; George R. Callender, Jr., Charleston; Charles M. Davis, Jr., Morgantown; Robert W. Lowe, Huntington; Buford W. McNeer, Hinton; Ralph S. Smith, Jr., Charleston; Robert J. Tchou, Williamson; William H. Wanger, Martinsburg; Roy James Yates, Beckley; and Syed A. Zahir, Beckley.

Medical Emergencies and Civil Defense

Donald R. Lantz, Parkersburg, Chairman; Adla Adi, Charleston; Aldolfo A. Andrada, Beckley; Ram P. Bhasin, Bluefield; John V. Brannon, Bridgeport; Frederick M. Cooley, Charleston; W. F. Daniels, Jr., Huntington; George D. Duffield, Charleston; Henry R. Glass, Jr., Charleston; James C. Hazlett, Wheeling; Jules F. Langlet, Charles Town; and Jerry A. Maliska, Charleston.

Minnesota Physician Named AAFP President Elect

Dr. Herb L. Huffington of Waterville, Minnesota, was named President Elect of the American Academy of Family Physicians on October 6 at the closing session in Chicago of the medical group's Congress of Delegates. The Congress meets in conjunction with the AAFP's Annual Scientific Assembly and convention, which was held October 6-9.

Doctor Huffington will assume the presidency of the Academy next year. His tenure will begin after that of Dr. Carl B. Hall of Charleston, who became President in inaugural ceremonies on October 7 (See story in the August issue of *The Journal*).

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for 1975 and part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1975)

Date	*Course Title*	*Place*
Nov. 7, 8	Surgery of the Major Blood Vessels—Department of Surgery and West Virginia Chapter of American College of Surgeons	Morgantown
Nov. 14, 15	Management of Blood and the Hospital Laboratory	Charleston
Dec. 5	Cardiology Teaching Day	Morgantown
Dec. 5, 6	Percutaneous Techniques in Neurosurgery	Morgantown
Dec. 19	Dermatology for the Primary Physician	Morgantown

(1976)

Feb. 25, 26	High Risk Pregnancy Management	Charleston
Mar. 13	Internal Medicine Teaching Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston
Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 16, 17	Drugs and Drug Interaction	Charleston
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30	Department of Pathology—Histochemical Techniques Seminar	Morgantown
Apr. 30-May 1	Seminar on Blood Banking	Morgantown

Breast Cancer Research Study At WVU Medical Center

Physicians who have patients who have had a recent mastectomy for breast cancer and who have axillary lymph nodes are being requested to consider referral of such patients for treatment to the West Virginia University School of Medicine.

The request came from Dr. Raymond B. Weiss, Associate Professor of Medicine and Chairman of the Division of Medical Oncology, in making the following announcement:

"The patient who has a mastectomy for breast cancer and has axillary lymph nodes involved by tumor is at high risk for having a recurrence and eventually fatal metastases. Recent studies at many medical centers in this country and abroad have shown that administration of chemotherapy in addition to surgery has reduced this high incidence of recurrence; presumably this means "cure" will be achieved. The Division of Medical Oncology at the West Virginia University Medical Center is conducting studies in cooperation with the National Cancer Institute in patients who have had a recent mastectomy and have *any* nodes involved in the axilla. It is asked that practicing physicians consider referral of such patients for treatment. The referring physician frequently can participate in the drug administration."

For further information call Doctor Weiss or Dr. Donald Doll at the Medical Center (293-4229 or 293-4536).

Medicare Deductible To Increase From $92 to $104 In 1976

The inpatient hospital deductible under Part A of Medicare will be increased from $92 to $104 for benefit periods beginning in 1976, it was announced by the Secretary of the U. S. Department of Health, Education and Welfare. Notice of the $104 deductible and related coinsurance amounts has been published in the Federal Register.

The new amounts are effective only with benefit periods starting in 1976. The current $92 inpatient deductible and related coinsurance amounts remain in effect for benefit periods which start in 1975, even though the benefit period extends into 1976.

Continuing Education Emphasized For AMA Clinical Convention

Continuing education for physicians will be the theme of the 29th Clinical Convention of the American Medical Association November 30 - December 5 in Honolulu.

Forty-one postgraduate courses will be offered to physicians attending the convention. Subjects will cover the entire range of medical practice—dermatology, blood lipids, infectious diseases in children,

Frank J. Holroyd, M. D.

Richard E. Flood, M. D.

new antibiotics, family planning, sexual difficulties, management of critically ill patients, special medical problems of women, child abuse, allergies, emergency room x-rays, and resuscitation in heart attacks.

Physicians involved in sports medicine will take courses on the physical exam, medical problems of karate, judo and yoga, emergency care on the field, wrestling, swimming and diving, and rehabilitation of the injured athlete.

Luncheon round tables will include sessions on ancient Polynesian medicine and on travel health.

Special lectures will be presented on the latest information on the state of the art in treatment of high blood lipids, stress ulcers, breast cancer, poisons, antibiotic therapy, coronary artery surgery, stomach cancer, computerized scanning, management of obesity and pulmonary clots.

General sessions will be presented on human sexuality, office management of alcoholism, and on weight control, diet and physical fitness.

Registration for the convention will open on Saturday, November 29. Courses and lectures will be held December 1 - December 5.

The AMA's policy-making body, the House of Delegates, will hold its semi-annual meeting, November 30 - December 3. West Virginia's Delegates to the House are Drs. Richard E. Flood of Weirton and Frank J. Holroyd of Princeton, with Drs. Harry S. Weeks, Jr., of Wheeling, and George R. Callender, Jr., of Charleston, as Alternates.

The complete program for the convention was published in the October 14 issue of *The Journal of the American Medical Association.*

Physicians Advised Of Medicare Claims Filing Deadline

Attention of physicians has been called to a Medicare regulation providing that claims for medical services between October 1, 1973 and October 1, 1974, can be paid only if mailed and delivered prior to the end of 1975.

Patients also should be advised of this deadline when possible, Nationwide Insurance, the carrier for physicians' services under Medicare, has emphasized.

In addition to the above time limit for filing claims, Medicare patients may lose their carry-over deductible credit by holding claims until the $60 annual deductible has been accumulated. Each year, when accumulated medical benefits do not total $60, they should be sent in—because in such cases bills from the fourth quarter services will also apply to the next calendar year's deductible.

Physicians who prepare claims for Medicare patients are requested to forward them promptly; otherwise, they should urge patients to file claims as they receive bills for services, particularly before the holiday mail rush.

CME Accreditation Survey Held For State Ob.-Gyn. Society

The West Virginia Obstetrical and Gynecological Society was surveyed for accreditation of its continuing medical education program during the Society's Fourth Annual Workshop September 26-27 in Huntington.

The accreditation survey was conducted by the State Medical Association through its Committee on Medical Education and Hospitals on Friday, September 26. Serving on the survey team were Drs. William J. Echols, Chairman, and Harold N. Kagan, both of Huntington.

The results of the survey will be announced following the next meeting of the Committee on Medical Education and Hospitals. Accreditation means that a continuing education program of a hospital or organization qualifies for credit in Category 1 of the American Medical Association's Physician's Recognition Award.

Other organizations and hospitals accredited by the State Medical Association to date are Beckley Appalachian Regional Hospital; Veterans Administration Center, Martinsburg; West Virginia Academy of Ophthalmology and Otolaryngology; West Virginia Chapter, American College of Surgeons; St. Mary's Hospital, Huntington; and Charleston Area Medical Center.

The Broaddus-Myers Clinic, in Philippi, will be surveyed on December 3.

Also tentatively scheduled for a CME accreditation survey in the near future is the joint continuing education program of the Ohio Valley Medical Center and Wheeling Hospital, in Wheeling.

Belief That TB Is Conquered A 'Dangerous Illusion'

Editor's Note: Following are excerpts from a recent issue of the *State of the State's Health*, by N. H. Dyer, M. D., M. P. H., West Virginia State Health Director:

Tuberculosis, the scourge of mankind for centuries, has at last been controlled—or has it?

In the early 1940's, Drs. Henry D. Chadwick and Alton S. Pope stated, in *The Modern Attack on Tuberculosis*, "Even now in the United States over 50,000 lives a year are taken by the tubercle bacillus. The goal of eradication can at last be visualized in the distance. The bells that ring in the year 2000 may sound the death knell of the tubercle bacillus. The ultimate surrender of the tubercle bacillus, therefore, is at least two generations away unless new developments in treatment come to our aid. Let us hope that this surrender may be brought about more quickly by discoveries made in the fields of chemotherapy and nutrition."

Yet, today, in the United States, tuberculosis is still very prevalent among persons of low economic status; it occurs also much more often than commonly recognized in affluent communities in the form of localized outbreaks. To a very large extent the continuance of the disease in our country results from the very persistent nature of the infection in man. Tuberculosis remains one of the largest—it not the largest—single cause of disease and death in all underprivileged parts of the world.

There is a widespread belief among the general public, and also in the health professions, that tuberculosis has been "conquered" and that measures for its control can safely be cut back. This is a dangerous illusion. According to the latest information received from the Public Health Service, Center for Disease Control, there were 16,509 tuberculosis cases reported in the United States during the first six months of 1975, compared to 15,444 cases reported for the same period in 1974. West Virginia reported 131 new cases during the first six months of 1975, compared to 120 new cases for the same period of 1974. It is too soon to tell if this increase is due to better case finding and reporting or is of actual significance.

An unprecedented revolution has taken place in treatment of the disease, concepts of tuberculosis control have been updated, and management methods modernized. Chemotherapy provided the key to a dilemma that plagued humanity for centuries. With the introduction of streptomycin in 1947, and other chemotherapeutic agents subsequently, the decrease in the death rate accelerated and morbidity rates decreased.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Nov. 6-8—Southern Thoracic Surgical Assn., New Orleans

Nov. 16-19—Southern Medical Assn., Miami Beach.

Nov. 17-21—Am. Heart Assn., Anaheim, Calif.

Nov. 29-Dec. 4—AMA Clinical, Honolulu.

Dec. 5-9—International College of Surgeons, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

1976

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

Jan. 30-Feb. 1—AMA Congress on Medical Education, Chicago.

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

Feb. 23-26—Am. College of Cardiology, New Orleans.

March 5-10—Am. Acad. of Allergy, San Juan, P. R.

March 17-20—AMA Regional Meeting, Lexington, Ky.

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

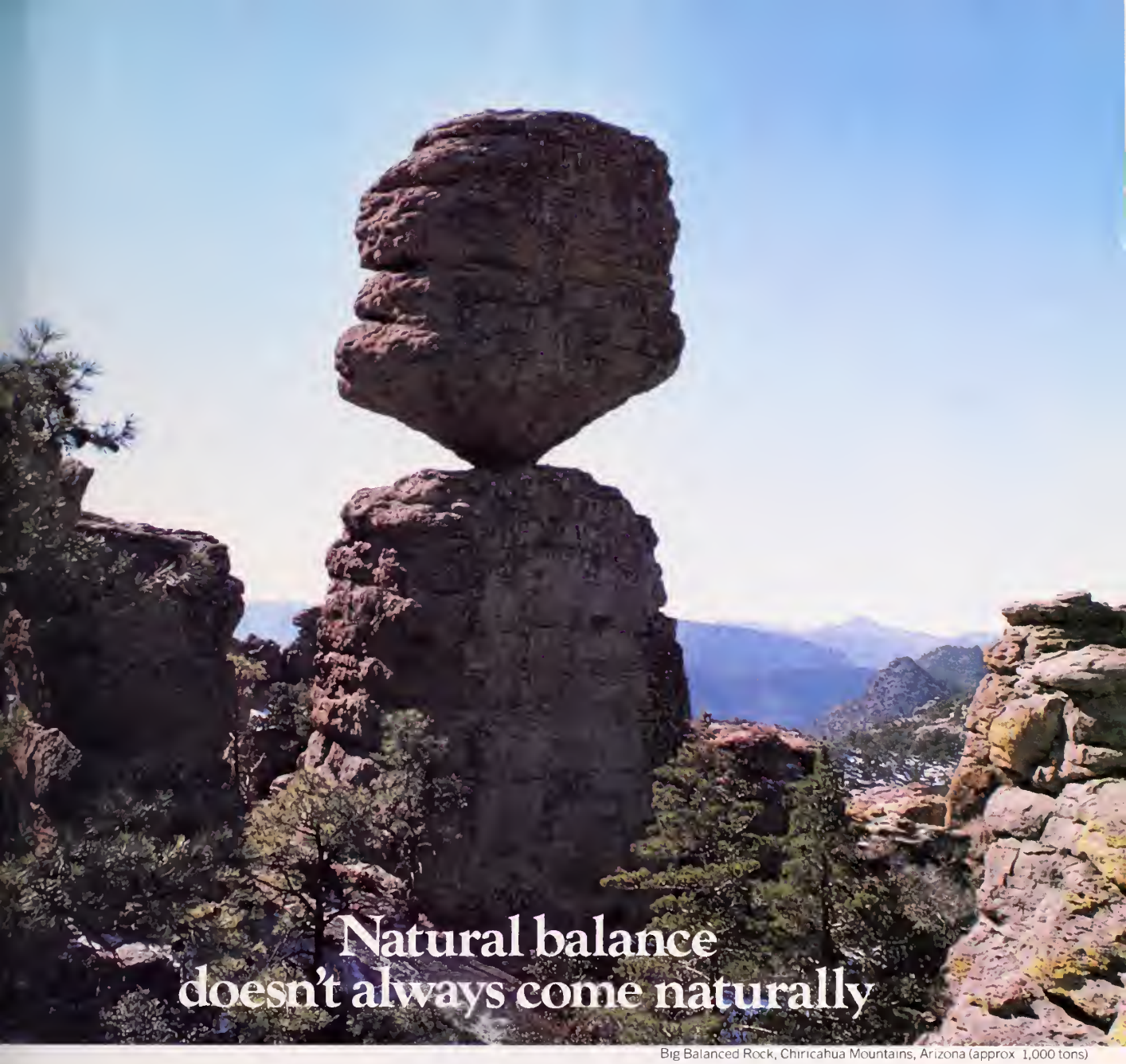
May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 26-July 1—AMA Annual Meeting, Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx 1,000 tons)

Found useful in the management of vertigo* associated with seases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

Also available as Antivert (meclizine HCl) 12.5 mg. scored plets, for dosage convenience and flexibility.

Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for usea, vomiting and dizziness associated with motion sickness.

IEF SUMMARY OF PRESCRIBING INFORMATION

INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children. Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration

The idea of a so-called patier package insert has been around fc a long time. Many physicians alrea use written instruction sheets to provide patients with information about the drugs they are taking. Ai some physicians give verbal instru tions; but in too many instances these are what I call eye-glazing e ercises. I have seen patients sit wit glazed eyes listening to a rapid-fire lecture by a hurried physician whc has 20 people out in his waiting room. These patients aren't given sufficient understanding and there fore do not follow instructions. So I think the idea of an official packag insert for patients is a good one. Perhaps we should really think of this kind of information simply as a extension of drug labeling.

The benefits of patient involvement

Many physicians may not rea ize how frequently a patient obtain his drug information from Aunt Tillie or the next door neighbor. An this information is almost always bad or irrelevant to the case at han Furthermore, the incentive to go along with a prescribed program is slim if the only reading matter the patient receives, along with his pre scription, is a bill.

As an educator I am impresse by the principle that the best way tc get someone to do something is to involve him in the process. So the

Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

I think there are advantages a well as some real disadvantages in a patient package insert. When you begin to use semi-medical or medi-cal terms to describe complication: or possible sequelae of disease or treatment, you may frighten the pa tient—particularly since the more highly sophisticated patient is not the one who is going to read the in-sert. The patient who will read it is the one most susceptible to fright and confusion by the language.

On the positive side, a packag insert will probably give the patient better insight into why he is being treated the way he is, and it may give the physician a little bit more time. But it does not remove from the physician the need or obligation to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be warned of the possibility of serious side reactions—to know what the real dangers are. But it doesn't do a bit of good to indicate that a patient on oral penicillin may develop a rash, itching, or a drop in blood pressure. Or that he may faint. I think the real danger is that fright engendered by the insert may pos-sibly outweigh the potential good.

n purpose of drug information
he patient is to get his coopera-
in following a drug regimen.

paration and distribution of ent drug information

We would hope to amass infor-
ion from physicians, medical
eties, the pharmaceutical indus-
and centers of medical learning.
ultimate responsibility for uni-
n labeling must, however, rest
the Food and Drug Administra-
. There is nothing wrong with
agency saying, "this informa-
is generally agreed upon and
efore it should be used," as long
ur process for getting the infor-
ion is sound.

Distribution of the information
problem. In great measure it
ld depend on the medication in
stion. For example, in the case
n injectable long-acting proges-
ne, we would think it mandatory
ssue two separate leaflets—a
rt one for the patient to read be-
getting the first shot and a long
to take home in order to make a
ision about continuing therapy.
is case, the information might
ut directly on the package and
removable at all. But for a medi-
on like an antihistamine this
rmation might be issued sepa-
ly, thus giving the physician the
on of distribution. This could
serve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

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y the doctor can remove that fear
20 or 30 minutes of conversation.

I'm not suggesting that we
hold any information from the
ent because, first of all, it would
otally dishonest and secondly, it
ld defeat the very purpose of the
rt. I do think that a patient on the
h control pill should know about
incidence of phlebothrombosis.

If you're going to tell a patient
incidence of serious adverse re-
ons, then you have to tell him
t a concerned medical decision
made to use a particular medi-
on in his situation after careful
sideration of the incidence of
nplications or side effects.

otionally unstable patients pose ecial problem

There are patients who, be-
se of severe emotional problems,
ld not handle the information
tained in a patient package in-
t. Yet if we are going to have a
kage insert at all, we just can't
e two inserts. I think we might
ply have to tell the families of
se patients to remove the insert
m the package.

gal implications of the patient kage insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

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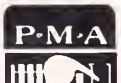


WVU Medical Center
–News–

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

MEMBERS of the Classes of 1965 and 1970 held 10-and 5-year reunions during the 1975 Alumni Weekend of West Virginia University School of Medicine on October 24 and 25 at the Ramada Inn in Morgantown.

Dr. W. Keith C. Morgan, Professor and Head of the Division of Pulmonary Diseases, and Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education, WVU School of Medicine, were speakers for the scientific session on Saturday, October 25. Doctor Morgan spoke on "Laboratory Lottery," and Doctor Lapp's subject was "Developing Programs for Continuing Education."

A brunch followed the program, after which buses transported alumni and guests to and from the WVU-VPI football game.

Final events on Saturday included a social hour, a banquet and business meeting, and a dance.

Senior Selective Year Program

Thirteen seniors in the West Virginia University School of Medicine recently gained experience in four hospitals in the State as part of the Senior Selective Year program.

Under this program, fourth-year students may spend as many as 24 weeks during the year (in six four-week blocks) away from the Medical Center at the Charleston Area Medical Center or any of 18 other hospitals which are members of the West Virginia Joint Council on Teaching Hospitals.

The goal of the program is to offer a broader medical education through a large selection of extramural opportunities which give the student a greater contact with doctors, hospitals and communities in the State. It also makes it possible for the student to begin earlier preparation for the type of medical career he or she desires.

Students who were to spend Block 5 (Sept. 22-Oct. 19) at State hospitals, and their area of special training, were:

Cabell Huntington: Mike Nerz, White Sulphur Springs, obstetrics-gynecology.

Charleston Area Medical Center: Jerry Edens, Elkview, pediatrics sub-intern; Paul Fulcher, Charleston, pulmonary diseases; Joe Goldston, Mt. Gilead, North Carolina, cardiology; Tim Harper, South Charleston, rheumatology; Mike Lawson, Parkersburg, medicine sub-intern III; Gary Marano, Clarksburg, cardiology; and Steve Miller, Morgantown, cardiology.

Ohio Valley Medical Center, Wheeling: William Brown, Morgantown, medicine sub-intern; Donald Kress, Hazlet, New Jersey, emergency room; Larry Mackall, Clarksburg, anesthesiology (last two weeks); and William Noble, Dunbar, medicine sub-intern.

Wheeling Hospital: Rocco Morabito, Huntington, general surgery.

Doctor Goplerud Ob-Gyn Speaker

A former faculty member of the Department of Obstetrics and Gynecology was scheduled as the first speaker in a series of lectures scheduled by that department.

Dr. Dean R. Goplerud, Associate Professor of Obstetrics and Gynecology and Director of Gynecologic Oncology at the Medical College of Virginia, visited the Medical Center on Thursday and Friday, October 2 and 3.

He participated in Departmental Grand Rounds on Thursday and discussed "Surgical Treatment of Cervical Carcinoma" later that day. At the Friday conference, Doctor Goplerud was scheduled to speak on "Colposcopic Observation Associated with Intrauterine DES Exposure."

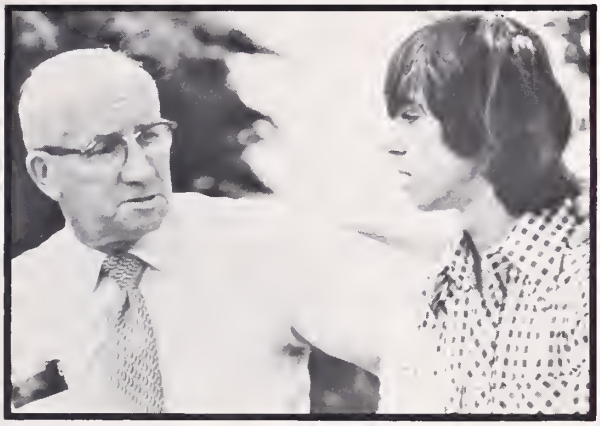
Other visiting lecturers will be Dr. Charles S. Mahan, Associate Professor of Obstetrics and Gynecology at the University of Florida, November 6-7, and Dr. R. Clay Burchell, Director of Obstetrics and Gynecology at the Hartford (Conn.) Hospital, December 4-5.

Doctor Mahan is the son of the late Dr. Charles Mahan, who was a Morgantown obstetrician-gynecologist for many years.

Medical Educator Speaks

Dr. Harold Jeghers, Medical Director of St. Vincent Hospital in Worcester, Massachusetts, was to visit the West Virginia University Medical Center on October 3 to present a talk on "Building a Personal Medical Library: An Effective Technique of Self-Education for Students and Physicians."

Doctor Jeghers, considered the dean of medical educators, possesses an extensive personal medical library. During his 40 years of teaching in medical schools, he has received many reports from physicians indicating that his method of continuing self-education has proved to be the single most helpful educational concept they learned in medical school.



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The Month in Washington

• From the Washington Office of the American Medical Association.

MEMBERS of the House Ways and Means Committee's Subcommittee on Health have heard testimony from foreign physicians extremely critical of the federalized national health insurance (NHI) systems in their native lands and from seven U. S. physicians who urged lawmakers not to allow this country to stumble down the same path.

All witnesses were selected by subcommittee Republican minority members to counterpoise arguments made by liberal witnesses produced during the summer by Democrat colleagues.

The major theme of the American physicians was that Federal interference should be kept to a minimum. Five of the seven physicians suggested that some form of catastrophic insurance might be beneficial.

Clinton S. McGill, M. D., Portland, Oregon, told the subcommittee that "freedom within the widest possible latitudes in the practice of medical care is an ingredient absolutely essential to the success of any NHI program."

John Hamilton, M. D., Rochester, New York, urged elimination of administrative red tape and proposed a catastrophic plan based on patients' ability to pay.

Marvin N. Lymberis, M. D., Charlotte, North Carolina, also spoke favorably of catastrophic coverage, warning that an omnibus bill might bankrupt the government and leave the present health system in a shambles.

John Burkhardt, M. D., Knoxville, Tennessee, said NHI must be carefully planned, cannot be all encompassing, and must not interfere with the doctor-patient relationship.

David Masland, M. D., Carlisle, Pennsylvania, warned of a possible paper work explosion if NHI is enacted, urged use of private carriers rather than a Federal bureaucracy, and noted that social factors have the biggest impact on the health of the nation.

Brooker Masters, M. D., Freemont, Michigan, said the nation does not have the resources at present for NHI. Rationing of services would be required, resulting in "medical care dictated by edicts in the Federal Registry" which would lead to "chaos."

Donald Quinlan, M. D., Northfield, Illinois, read a strongly-worded statement opposing any new Federal programs as "compulsory politicized medicine." He accused the Administration and Congress of the "great rip-off" of deficit financing.

The domestic panel was questioned by subcommittee Chairman Dan Rostenkowski (D-Ill.) and Reps. John Duncan (R-Tenn.), James Martin (R-N. C.), and Philip Crane (R-Ill.). They praised the panel members for their testimony.

Asked by Rep. Charles Vanik (D-Ohio) to give a show of hands on how many would support a catastrophic plan, six of the witnesses raised their hands, but none did when he asked for their sentiments on catastrophic health insurance operated by Social Security. Vanik contended that the public is pushing Congress on NHI, asserting that the lawmakers are not the innovators.

Foreign Physicians Heard

The foreign panel consisted of two British physicians, a British medical writer, a former Swedish physician, and a Canadian physician—Max Gammon, M. D., London; Reginald S. Murley, M. D., London; Anthony Lejeune, Middlesex, England, medical writer; Sigmund J. Lofstead, M. D., Chicago; and Bette Stephenson, M. D., Toronto.

As a group they urged Congress not to permit governmental control of medicine in this country.

The British witnesses painted a black picture of the situation in England. Doctor Murley said almost all physicians in England are totally opposed to the policies of the government and predicted a "massive confrontation" soon.

Doctor Lofstead, who had practiced in Sweden, said health care has become regimented and politicized in that country. Most people in the U. S. he said, have financial access to the best and most sophisticated health care in the world.

Doctor Stephenson was less critical of the Canadian program, but said any NHI program should involve as little distortion of the present U. S. system as possible. She said fee-for-service is the most efficient and fairest method of payment.

Doctor Gammon said it is imperative that the U. S. resist the socialization of medicine "for the good of the rest of the free world." He said that "if you believe that the state is better able to control the affairs of individuals than they are, then the prospects of freedom for the rest of the world are very dim."

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E. C. Vass, M. D.

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M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Watersan, M. D.
Sheldan Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelsan, Ed D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
A. K. Butler, M. D.
J. N. Aceta, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joyce Cerra, P. A.
Joann Green, P. A.
Michael G. Siman, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

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Henry L. Castilaw, Asst. Mgr.

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James A. Gardner, M. D.

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Maria C. Ramos, M. D.
George Orphanos, M. D.

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Mariamma Abraham, M. D.

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Urology
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R. G. D. Concepcion, M. D.

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P. C. Carra, M. D.

Radiology
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Clinic Manager
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Obituaries

DANIEL HALE, M. D.

Dr. Daniel Hale, a Princeton family physician, died on September 29 while attending a committee meeting of the State Soil Conservation Districts at Blackwater State Park. He was 63.

Active in community affairs, with an emphasis on conservation, Doctor Hale became nationally known for his work in the conservation field and also as Chairman of the Southern West Virginia Regional Health Council, a system linking nine rural counties into one health care unit.

A native of Princeton, Doctor Hale was graduated from the University of Illinois and received his M. D. degree in 1937 from Northwestern University Medical School. He had practiced medicine in Princeton since 1939 and had been a member of the staff of the former Princeton Memorial Hospital and the present Princeton Community Hospital.

Doctor Hale was President of the Mercer County Medical Society in 1948 and, at the time of his death, Chairman of the Mercer County Board of Health.

His many honors included the Governor's Award as "State Conservationist of the Year" in 1966, and being named the "West Virginian of the Year" by the Charleston Gazette in 1969. He received an honorary Doctor of Humanities Degree from West Virginia Tech in 1971 and this year was one of the first 25 to be named to the West Virginia Agriculture Hall of Fame.

Doctor Hale was the force behind the Southern West Virginia Regional Health Council, and also pushed to build the Brush Creek watershed which provides water for the city of Princeton. The project was named the Daniel Hale Reservoir in his honor.

Among those issuing public statements in lamenting his death and praising his career in public health and conservation were Senators Robert C. Byrd and Jennings Randolph and Rep. Ken Hechler of West Virginia, and Dr. N. H. Dyer, State Health Director.

Survivors include two sisters, Mrs. Thomas McFarland of Princeton, with whom he made his home, and Mrs. Lester Dunbar of Chesterton, Indiana; and two brothers, Ralph Hale of Princeton and James Hale of Pittsburgh.

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Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
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Moseley H. Winkler, M.D.
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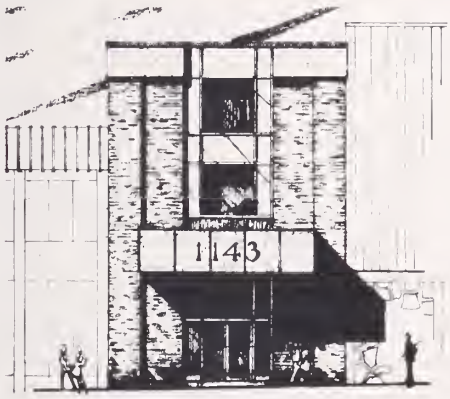

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*Annual Report**

Committee on Aging

This is the sixth annual report to be presented by this Chairman of the Committee on Aging to the West Virginia State Medical Association.

The Transportation Stamp Program for the aging and physically handicapped, called TRIP, was officially announced by Governor Arch A. Moore, Jr., on June 13th, 1974. Since the initial start of this program, great progress has been made. The allowable monthly income for eligible individuals has been increased from $35 per month to $237 per month. At our recent annual medical meeting at The Greenbrier our display was entitled, "Evolution of TRIP." The medical profession has an obligation to help make this program a success. Why? Because the physician is interested in patients, and many of his patients are aged and physically handicapped. Again, Governor Moore should be commended for taking the initiative in providing this humanitarian service and in his selection of Mrs. Grace Strain as Executive Director of TRIP, and in the appointment of Mr. Thomas R. Tinder as Commissioner of The Department of Welfare. An up-dated description of the TRIP Program provided by Mrs. Strain is included in this report.

There will always be a shortage of physicians in some sections of our State. The West Virginia University School of Medicine is attempting to help solve this unfortunate situation. Also included in this report are letters from Dean John E. Jones, M. D., and Dr. John W. Traubert, Chairman of the Department of Family Practice, which explain what is being done to correct this situation.

This fall, the first-year class in the School of Medicine is composed of 84 native West Virginians. Eventually, this number would be expanded to 100. The School of Medicine now has two branch divisions, one in Wheeling and one in Charleston, and they are meeting with success. Why not a third division located in Huntington? At this time it is questionable whether a second medical school will or should be set up in West Virginia. In the meantime let us make it more attractive to the young physician and his family to locate in West Virginia.

August 11, 1975

The Transportation Remuneration Incentive Program is the first statewide rural transportation program in the United States. Basically, it is designed around the following three goals: (1) To provide increased transportation buying power to low-income elderly and/or handicapped individuals; (2) To provide support to existing transportation providers in West Virginia; and (3) To provide a program to expand and to develop transportation throughout West Virginia.

In order to accomplish the first two goals, the TRIP ticket system for low-income elderly (over 60 years of age) and handicapped individuals was developed. The system operates by determining the eligibility and ticket purchase cost for the individual on an income basis. Only income directly available to the eligible individuals in a household is considered. Thus, an individual receiving $157 SSI who lives with ineligible relatives, or alone, would be eligible to purchase one $8 ticket book per month at the purchase price of $1. Due to recent guideline changes, the average price paid by eligible individuals for each book is $2. In this manner, extra transportation buying power is provided and, in addition, increased buying power means increased usage of available transportation. At this time, there are 130 authorized transportation providers who accept TRIP tickets throughout our State. The TRIP ticket system allows more individuals to make use of existing transporation more often.

Since 23 of the 55 counties which make up West Virginia have little or no available public transporation, a program which dealt only with a transportation ticket system would fall short of meeting the needs of the State. During the three-year demonstration period, 215 vehicles will be placed into operation throughout West Virginia in order to expand and to develop transportation availability. *Anyone may use these buses,* which will operate on regular routes. Included in this design are several innovative demonstration projects such as a special Health Transporter and a combination Postal and Public Bus.

TRIP is a program designed for *all* West Virginians. Transportation is a need which transcends socio-economic lines. If you know of any individuals over the age of 60 or handicapped, please refer them to your local Department of Welfare so they may apply. The program is *not* a welfare program. You do not have to be receiving welfare benefits in order to participate. The West Virginia Department of Welfare is only administering the program due to the lack of a State Department of Transportation. Also, the implementation of the 215 vehicles will begin this fall, increasing transportation availability for everyone. TRIP is an example of another step West Virginia is taking toward meeting the needs of her citizens. Help us help you!

August 7, 1975

Dear Doctor Tucker:

As per your recent request, I am writing to advise you of some of the steps that the School of Medicine has taken to help retain more physicians for practice in the State of West Virginia.

I know you are aware that where one finishes postgraduate medical education bears substantially more relationship to one's practice location than does where one went to school. It was with this knowledge and the desire to utilize the outstanding skills of practicing physicians that the School of Medicine actively sought the development of divisions of the School of Medicine in Charleston and Wheeling, West Virginia. The Charleston Division, of course, has a very substantial head start on the Wheeling Division. The success of the Charleston program can be measured very easily in the fact that in 1972 eight of our graduates were pursuing post M. D. studies in the Charleston Area Medical Center while, in 1975, 43 of our graduates are involved in post M. D. education in the Charleston Area Medical Center. In addition, nearly 100 of our junior and senior medical students received part of their clinical experiences in the Charleston Division last year.

*Other annual reports were published in the August, 1975 issue of **The Journal**.

I want to emphasize the major contributions made by many Charleston physicians to this medical education program. Twenty-seven of our senior students received clinical training in the Wheeling Division last year. The net effect of both of these programs should ultimately be to attract more of our and other American graduates for practice in the State of West Virginia.

One can hardly overlook the great success of the Department of Family Practice at the West Virginia University Medical Center. This program is now in its second year with more than a dozen residents in training. An additional five third-year positions in Family Practice are anticipated for the Family Practice Department in 1976. Add to this the real growth and success of the Kanawha Valley Family Practice program, now in its second year, and the development of both the Wheeling Family Practice program and the independent Clarksburg Family Practice program. Both of these programs now have first-year residents.

In addition, others of our senior students are gaining clinical experience in Joint Council Teaching Hospitals throughout the State. The Joint Council of Teaching Hospitals has afforded important avenues of experiences to introduce students to the advantages and desirability (hopefully) of the several communities in which they receive training.

As of July, 1975, 275 of our 809 four-year graduates of the School of Medicine have current West Virginia addresses. Each year more of our former graduates are returning to the State to practice. In addition, a number of non-West Virginia University graduates who have received training at the University Hospital, the Charleston Area Medical Center or the Wheeling hospitals, are in practice in the State. I know you are aware of the several former residents from the University programs who are in practice in Morgantown, for example.

The School of Medicine has always given preference to qualified West Virginia residents for entry into medical school. The entering freshman class in 1974 had 82 State residents and two out-of-state residents, both of whom had strong family ties to West Virginia (grandparents, uncles, aunts, wives, etc.). The entering freshman class for 1975 is composed of 84 West Virginia residents. Each of these candidates at the time of interview professed the intent to practice in the State of West Virginia.

An increasing number of our graduates has been staying in the State for postgraduate medical education. Of the 82 graduates of the class of 1975, 40 have stayed in West Virginia for their first postgraduate year. The majority of these are taking training in primary care programs (e.g., Family Practice, Internal Medicine, Pediatrics). As I have already suggested, there is an increasing interest of our students in Family Practice training.

Add to this that for the first time this year I have appointed an Assistant Dean for Continuing Medical Education. He has already taken great strides and is moving towards gaining AMA accreditation for Continuing Medical Education. This development will greatly aid all practitioners in delivering the highest possible quality of health care. Regrettably, adequate funding for this important program has yet to be developed.

All in all, I do not believe it is unreasonable to expect an increasing number of our graduates to stay in West Virginia at the completion of their training. Just how the proposed Health Manpower legislation and suggested required service in "underprivileged areas" will affect the retention of graduates to either practice or serve in West Virginia I cannot now predict. There is, further, the major consideration that communities and the medical profession have the responsibility of developing the proper environment to attract graduate physicians or other professionals.

The confusion and delays in our last two legislative years, and our inability to gain adequate funding to develop the Charleston, Wheeling, and Morgantown programs (including Continuing Medical Education) to the level we feel desirable and necessary, have hampered our progress. I know that the Board of Regents' Committee on Health Education is now considering medical education needs for the State as a whole. It is my hope and expectation that we will soon have answers to our long-standing recommendations that we be granted the faculty and facilities that will allow an expansion of our medical school class size and make us more able to expand graduate medical education programs, predominantly in the primary care areas, in the State.

I hope this information will prove of use to you.

Sincerely yours,
(s) John E. Jones, M. D.

July 22, 1975

Dear Doctor Tucker:

I am writing to give you an update on the progress of Family Practice. This past year, Family Practice has more than doubled throughout West Virginia.

Currently, there are four training sites for family physicians in West Virginia. These include Clarksburg, Morgantown, South Charleston and Wheeling. Twenty-five young men and women are currently in training to become Board Certified family physicians. One year ago at this time there were nine.

Two physicians from these programs are currently in private practice serving areas of need in West Virginia.

The future plans include the development of a training site in Huntington and a second program in Kanawha County. Our dream is to graduate 40 family physicians each year.

Many community hospitals throughout West Virginia are now offering senior medical students a Family Practice Selective. These hospitals, through their membership in the Joint Council on Teaching Hospitals, offer worthwhile learning experience to the senior medical students in the community as opposed to the university setting. Small communities are now able to contribute to medical education through this program.

Students have the opportunity to give limited services, but more important, to learn about life in the smaller communities.

The family physician is probably the senior citizen's best friend. It is hoped that the time will produce these friends in sufficient numbers to serve all of West Virginia.

Sincerely,
(s) John W. Traubert, M. D.

Complaints have been made in the news media concerning the present method for screening medical students. Does the public have a stake in this selection? Why do you want to be a physician should be one of the first questions asked. If making money or prestige is the prime factor, then that

applicant should be promoted to the foot of the class. Ideals should be high among this group of students. Subsidized medical students have a moral obligation to practice within the State for a reasonable period of time or make a refund of the subsidy.

It is recommended that hospitals should have a social service division and, when that is not possible, the county health department should assume that responsibility. The patient-physician relationship should not be interfered with by a third party or a hospital committee. No aged or physically disabled patient should be discharged from a publicly subsidized hospital unless adequate home care or nursing home care can be assured.

It is now relatively easy for an aged hospitalized patient to be transferred to a nursing home or a convalescent home. There, the screening process begins. The local review board takes over and decides what type of care is indicated, skilled nursing or custodial care only. If the decision is unfavorable concerning Medicare responsibility, then someone must assume financial responsibility. This decision is approved or rejected by a higher board. Next, an appeal can be made to or through Social Security. The bill for a hospitalized Medicare patient transferred to a nursing home should be assumed by Medicare in part or in whole until such time as it is rejected by the health insurance board or by the appeal to Social Security. Many of these aged patients are not physically or mentally qualified to apply for all of the benefits they are entitled to receive. The physician or his or her secretary should become experts in filing Medicare and insurance claims. They may also need help if they live long enough.

Respectfully submitted,
Eldon B. Tucker, M. D.
Chairman
Myer Bogarad, M. D.
Richard D. Hamilton, M. D.

STATEMENT REQUIRED BY THE ACT OF OCTOBER 23, 1962; SECTION 4369, TITLE 39, UNITED STATES CODE SHOWING THE OWNERSHIP, MANAGEMENT AND CIRCULATION OF THE WEST VIRGINIA MEDICAL JOURNAL.

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I certify that the statements made by me above are correct and complete.

(Signed) Charles R. Lewis,
Managing Editor

University of Cincinnati Medical Center Opens Ear Bank

The University of Cincinnati Medical Center has announced the official opening of the Cincinnati Ear Bank.

This non-profit laboratory will make available transplant ear drums and middle ear bones to otologic surgeons across the country. Since the processing of homograft middle ear transplant tissue is quite complex, most ear surgeons do not have the facilities available to prepare their own materials. At the present time, the Cincinnati Ear Bank has an adequate supply of materials to deliver them by mail to surgeons within 72 hours.

Details of the new service were explained recently at a Symposium on Homograft Tympanoplasty at the University of Cincinnati Medical Center. This symposium brought together for the first time in the nation a faculty of pioneers in the field of homograft tympanoplasty (reconstructive ear surgery). Nearly 100 ear surgeons from this country and Canada attended the symposium to learn of the various surgical techniques that this new era in ear surgery has developed.

Dr. S. George Lesinski, Director of the Cincinnati Ear Bank, and Assistant Professor in the College of Medicine Department of Otolaryngology and Maxillofacial Surgery, has been actively involved in transplantation research for the past year at the University of Cincinnati. Initial results, he states, have been most encouraging.

The Cincinnati Ear Bank will serve a three-fold purpose for the community: (1) to provide transplant tissues to practicing ear surgeons; (2) to continue ongoing research in the field of homograft tympanoplasty, and (3) to educate surgeons in these newer techniques.

The Cincinnati Ear Bank has been established with the financial assistance of individuals in the community.

Further information about the Cincinnati Ear Bank can be obtained by writing the Cincinnati Ear Bank, Room #6308, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, Ohio 45267; or by calling the Bank office (513-872-4056).

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. The 1976 Roster of Members will be prepared and placed in the mails shortly after the first of the year and we would very much like for your correct address to appear in same. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

109th ANNUAL MEETING

of the

West Virginia State Medical Association

The Greenbrier

AUGUST 18-21. 1976

PLAN NOW TO ATTEND

County Societies

MONONGALIA

Dr. Jack Leckie of Huntington, President of the State Medical Association, was guest speaker at the meeting of the Monongalia Medical Society on September 2 at the Lakeview Inn and Country Club in Morgantown. Spouses of members were present.

Doctor Leckie, who was accompanied by Mrs. Leckie, spoke on the positive aspects of medical care in West Virginia.

During the business meeting a large number of applicants for membership were accepted.—H. Summers Harrison, M. D., Secretary.

* * *

CABELL

The Cabell County Medical Society met on September 11 at the Gateway Motel in Huntington. Coach Frank Ellwood gave a highly entertaining talk on football at Marshall University.

The Society appointed Dr. Robert W. Lowe to represent orthopedic surgeons, and Dr. James P. Carey to represent general surgeons, on the Blue Shield Fee Schedule Advisory Board. Dr. Winfield C. John was appointed to sit on the Board of the Valley Health System Corporation.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on September 15 at the University Club in Bluefield. Dr. Robert B. Buckingham gave an interesting talk on gout and pseudogout. He demonstrated that crystals of uric acid can be identified through a microscope as needle-like, refringent crystals. Pseudogout crystals are rhomboid in shape and have a bluish color under polarized light.

Apparently, patients with elevated uric acid have no symptoms of gout for about 12 years. Doctor Buckingham stressed that gout cannot be cured, but can be controlled.—John J. Mahood, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on September 10 at Doctor's Memorial Hospital in Welch.

It was announced that Dr. Jack Leckie of Huntington, President of the State Medical Association, will visit the Society on November 12.

A film was presented by Mrs. Montoya, anesthetist at Doctor's Memorial Hospital, on the use of hypnosis during obstetrical procedures.—Arthur A. Carr, M. D., Secretary.

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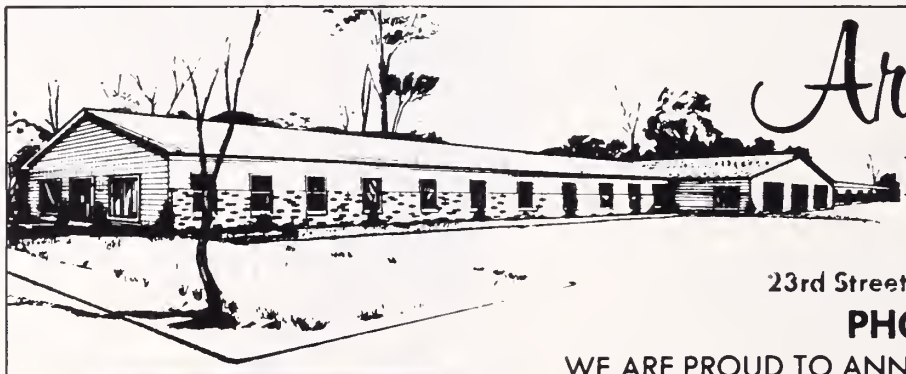

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EMERGENCY ROOM PHYSICIAN—Wanted for 200-bed general hospital in beautiful mountain area; immediate opening; attractive working hours. Possibility of becoming member of well established group; excellent opportunity for general physician who wants to work regular hours. Give details of training and present position on first inquiry. Immigrant visa and permanent ECFMG Certificate required for foreign graduates. Address inquiries to J. N. Vallandingham, Bluefield Sanitarium, Bluefield, W. Va. 24701.

WANTED—Mountaineer Family Health Plan, a model pre-paid primary care program needs a board certified or eligible internist, pediatrician, and a family practitioner for patient care, consultation and teaching. Facilities include primary care center adjacent to 221-bed hospital with fully staffed emergency room and three rural satellite clinics in beautiful Southern West Virginia mountains. Excellent salary plus fringe benefits. Call or write John Betinis, M. D., Box 1149, Beckley, West Virginia 25801; Telephone (304) 252-8551.

SURGICAL RESIDENCY AVAILABLE: Large metropolitan hospital, fully accredited for residency training. Contact Bert Bradford, Jr., M. D., Director of Surgery, Charleston Area Medical Center, 3200 MacCorkle Avenue, S. E., Charleston, W. Va. 25304.

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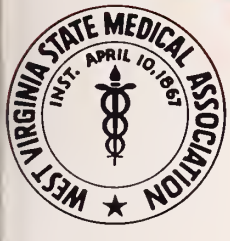

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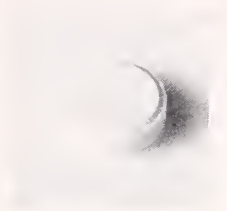

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DECEMBER
1975

Vol. 71 No. 12

The WEST VIRGINIA Medical Journal

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DYAZIDE® MAKES SENSE

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* Warning
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

***Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without

been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

the "empty nest syndrome"

TRIAVIL®

containing perphenazine and amitriptyline HCl
a tranquilizer-antidepressant

for depression with moderate anxiety

in many cases a result of the "empty nest syndrome"

The mid-life crisis: a critical crossroad

Preparation for change—intellectually, vocationally (or avocationally), and emotionally—can often help the menopausal-aged woman cope successfully with a new and different role after the children are grown and gone. Even when these changes have been anticipated and prepared for, a mid-life depression with moderate anxiety is not uncommon—a syndrome often uncontrolled by counseling or other appropriate measures and for which specific medication may be required.

When depression with moderate anxiety persists, TRIAVIL can often help

TRIAVIL provides a highly effective antidepressant and tranquilizer for symptomatic relief of *both* depression and coexisting moderate anxiety. The patient may be able to function more effectively in her daily life.

Many symptoms associated with depression and anxiety such as insomnia, fatigue, anorexia, and functional G.I. complaints, are frequently alleviated. More complete symptomatic relief is usually afforded than with an antidepressant or a tranquilizer alone. In fact, when anxiety masks the depressive state, treatment with just a tranquilizer may deepen the depression and delay symptomatic improvement.

Advantages of the two components in TRIAVIL taken together

A single tablet containing both an antidepressant and a tranquilizer encourages patients to take medication properly and reduces the risk of dosage confusion and error. Cost of therapy to the patient is usually less. To date, clinical evaluations have revealed no undesirable reactions peculiar to the combination. Tablets TRIAVIL are available in four different combinations affording flexibility and individualized dosage adjustment.

Treatment with TRIAVIL—a balanced view

Contraindicated in CNS depression from drugs; in the presence of evidence of bone marrow depression; and in patients hypersensitive to phenothiazines or amitriptyline. Should not be used during the acute recovery phase following myocardial infarction or in patients who have received an MAOI within two weeks. Patients with cardiovascular disorders should be watched closely. Not recommended in children or during pregnancy. The drug may impair mental or physical abilities required in the performance of hazardous tasks and may enhance the response to alcohol. Antiemetic effect may obscure toxicity due to other drugs or mask other disorders. Since suicide is a possibility in any depressive illness, patients should not have access to large quantities of the drug. Hospitalize as soon as possible any patient suspected of having taken an overdose.

MSD
MERCK SHARP & DOHME

For additional prescribing information, please turn to the following page.

for highly effective relief of depression with moderate anxiety

TRIAVIL®

containing perphenazine and amitriptyline HCl
a tranquilizer-antidepressant

Available:

TRIAVIL® 2-25: Each tablet contains 2 mg perphenazine and 25 mg amitriptyline HCl

TRIAVIL® 2-10: Each tablet contains 2 mg perphenazine and 10 mg amitriptyline HCl

TRIAVIL® 4-25: Each tablet contains 4 mg perphenazine and 25 mg amitriptyline HCl

TRIAVIL® 4-10: Each tablet contains 4 mg perphenazine and 10 mg amitriptyline HCl

INITIAL THERAPY FOR MANY PATIENTS
TRIAVIL® 2-25 (or TRIAVIL® 4-25) t.i.d. or q.i.d.

FOR FLEXIBILITY IN ADJUSTING MAINTENANCE THERAPY
TRIAVIL® 2-10 (or TRIAVIL® 4-10)

CONTRAINDICATIONS: Central nervous system depression from drugs (barbiturates, alcohol, narcotics, analgesics, antihistamines); bone marrow depression; known hypersensitivity to phenothiazines or amitriptyline. Do not give concomitantly with MAOI drugs because hyperpyretic crises, severe convulsions, and deaths have occurred from such combinations. Allow minimum of 14 days between therapies, then initiate therapy with TRIAVIL cautiously, with gradual increase in dosage until optimum response is achieved. Not recommended for use during acute recovery phase following myocardial infarction.

WARNINGS: TRIAVIL should not be given with guanethidine or similarly acting compounds. Use cautiously in patients with history of urinary retention, angle-closure glaucoma, increased intraocular pressure, or convulsive disorders. In patients with angle-closure glaucoma, even average doses may precipitate an attack. Patients with cardiovascular disorders should be watched closely. Tricyclic antidepressants, including amitriptyline HCl, particularly in high doses, have been reported to produce arrhythmias, sinus tachycardia, and prolongation of conduction time. Myocardial infarction and stroke have been reported with tricyclic antidepressant drugs. Close supervision is required for hyperthyroid patients or those receiving thyroid medication. Caution patients performing hazardous tasks, such as operating machinery or driving motor vehicles, that drug may impair mental and/or physical abilities. Not recommended in children or during pregnancy.

PRECAUTIONS: Suicide is a possibility in depressed patients and may remain until significant remission occurs. Such patients should not have access to large quantities of this drug.

Perphenazine: Should not be used indiscriminately. Use with caution in patients who have previously exhibited severe adverse reactions to other phenothiazines. Likelihood of untoward actions is greater with high doses. Closely supervise with any dosage. The antiemetic effect of perphenazine may obscure signs of toxicity due to overdosage of other drugs or make more difficult the diagnosis of disorders such as brain tumor or intestinal obstruction. A significant, not otherwise explained, rise in body temperature may suggest individual intolerance to perphenazine, in which case discontinue.

If hypotension develops, epinephrine should not be employed, as its action is blocked and partially reversed by perphenazine. Phenothiazines may potentiate the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol) and atropine. In concurrent therapy with any of these, TRIAVIL should be given in reduced dosage. May also potentiate the action of heat and phosphorous insecticides.

Amitriptyline: In manic-depressive psychosis, depressed patients may experience a shift toward the manic phase if they are treated with an antidepressant. Patients with paranoid symptomatology may have an exaggeration of such symptoms. The tranquilizing effect of TRIAVIL seems to reduce the likelihood of this effect. When amitriptyline HCl is given with anticholinergic agents or sympathomimetic drugs, including epinephrine combined with local anesthetics, close supervision and careful adjustment of dosages are required.

Caution is advised if patients receive large doses of ethchlorvynol concurrently. Transient delirium has been reported in patients who were treated with 1 g of ethchlorvynol and 75-150 mg of amitriptyline HCl.

Amitriptyline HCl may enhance the response to alcohol and the effects of barbiturates and other CNS depressants.

Concurrent administration of amitriptyline HCl [illegible]

Such treatment should be limited to patients for whom it is essential. Discontinue several days before elective surgery if possible. Elevation and lowering of blood sugar levels have both been reported.

ADVERSE REACTIONS: Similar to those reported with either constituent alone.

Perphenazine: Side effects may be any of those reported with phenothiazine drugs: extrapyramidal symptoms (opisthotonus, oculogyric crisis, hyperreflexia, dystonia, akathisia, acute dyskinesia ataxia, parkinsonism) can usually be controlled by the concomitant use of effective antiparkinsonian drugs and/or by reduction in dosage, but sometimes persist after discontinuation of the phenothiazine.

Tardive dyskinesia may appear in some patients on long-term therapy or may occur after drug therapy with phenothiazines and related agents has been discontinued. The risk appears to be greater in elderly patients on high-dose therapy, especially females. Symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth, or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements). Involuntary movements of the extremities sometimes occur. There is no known treatment for tardive dyskinesia; antiparkinsonism agents usually do not alleviate the symptoms. It is advised that all antipsychotic agents be discontinued if the above symptoms appear. If treatment is reinstituted, or dosage of the particular drug increased, or another drug substituted, the syndrome may be masked. It has been suggested that fine vermicular movements of the tongue may be an early sign of the syndrome, and that the full-blown syndrome may not develop if medication is stopped when lingual vermiculation appears.

Other side effects are skin disorders (photosensitivity, itching erythema, urticaria, eczema, up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperglycemia; endocrine disturbances (lactation, galactorrhea, gynecomastia, disturbances of menstrual cycle); altered cerebrospinal fluid proteins; paradoxical excitement; hypertension hypotension, tachycardia, and ECG abnormalities (quinidine-like effect); reactivation of psychotic processes; catatonic-like states; autonomic reactions, such as dry mouth or salivation, headache anorexia, nausea, vomiting, constipation, obstipation, urinary frequency or incontinence, blurred vision, nasal congestion, and a change in pulse rate; hypnotic effects; pigmentary retinopathy; corneal and lenticular pigmentation; occasional lassitude, muscle weakness, mild insomnia. Other adverse reactions reported with various phenothiazine compounds include blood dyscrasias (pancytopenia thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia); liver damage (jaundice, biliary stasis); grand mal convulsions; cerebral edema; polyphagia; photophobia; skin pigmentation; and failure of ejaculation.

Amitriptyline: Note: Listing includes a few reactions not reported for this drug, but which have occurred with other pharmacologically similar tricyclic antidepressant drugs. *Cardiovascular:* Hypotension; hypertension; tachycardia; palpitation; myocardial infarction; arrhythmias; heart block; stroke. *CNS and Neuromuscular:* Confusional states; disturbed concentration; disorientation; delusions; hallucinations; excitement; anxiety; restlessness; insomnia; nightmares; numbness, tingling, and paresthesias of the extremities; peripheral neuropathy; incoordination; ataxia; tremors; seizures; alteration in EEG patterns; extrapyramidal symptoms; tinnitus; syndrome of inappropriate ADH (antidiuretic hormone) secretion. *Anticholinergic:* Dry mouth; blurred vision; disturbance of accommodation; constipation; paralytic ileus; urinary retention; dilatation of urinary tract. *Allergic:* Skin rash; urticaria; photosensitization; edema of face and tongue. *Hematologic:* Bone marrow depression including agranulocytosis; leukopenia; eosinophilia; purpura; thrombocytopenia. *Gastrointestinal:* Nausea; epigastric distress; vomiting; anorexia; stomatitis; peculiar taste; diarrhea; parotid swelling; black tongue. *Endocrine:* Testicular swelling and gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido; elevated or lowered blood sugar levels. *Other:* Dizziness; weakness; fatigue; headache; weight gain or loss; increased perspiration; urinary frequency; mydriasis; drowsiness; jaundice; alopecia. *Withdrawal Symptoms:* Abrupt cessation after prolonged administration may produce nausea, headache, and malaise. These are not indicative of addiction.

OVERDOSAGE: All patients suspected of having taken an overdosage should be admitted to a hospital as soon as possible. Treatment is symptomatic and supportive. However, the intravenous administration of 1—3 mg of physostigmine salicylate is reported to reverse the symptoms of tricyclic antidepressant poisoning. Because physostigmine is rapidly metabolized, the dosage of physostigmine should be repeated as required particularly if life-threatening signs such as arrhythmias, convulsions, and deep coma recur or persist after the initial dosage of physostigmine. On this basis, in severe overdosage with perphenazine-amitriptyline combinations, symptomatic treatment of central anticholinergic effects with physostigmine salicylate should be considered.

For more detailed information, consult your MSD Representative or see full Prescribing Information

MSD
MERCK

Famous Fighters

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)
is a famous fighter, too.

Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

There's something special about children vomi

The risk of dehydration . . . plus the psychologi
stress on both mother and child . . .
greatly increases the urgency in controlling vo
in children. In addition, there is, of course, nee
avoid the extrapyramidal problems associated
phenothiazine medications.

at's why special medication is preferred

S® CHILDREN SUPPRETTES™ are specially lated to stop vomiting and nausea in children— y and with minimal complications.

NS are administered rectally—often the best n the vomiting patient.

exclusive WANS formula provides both nine maleate and sodium pentobarbital for veness . . . contains no phenothiazines or local ietics.

unique Supprette delivery system rapidly es effective levels of medication . . . with no fatty acids to affect absorption or cause local ion.

NS SUPPRETTES require no refrigeration . . . rication other than water . . . and dissolve etely, with virtually no leakage.

r children over 12 years of age and adults ng from nausea and vomiting, consider higher- th WANS® No. 1 or WANS® No. 2.

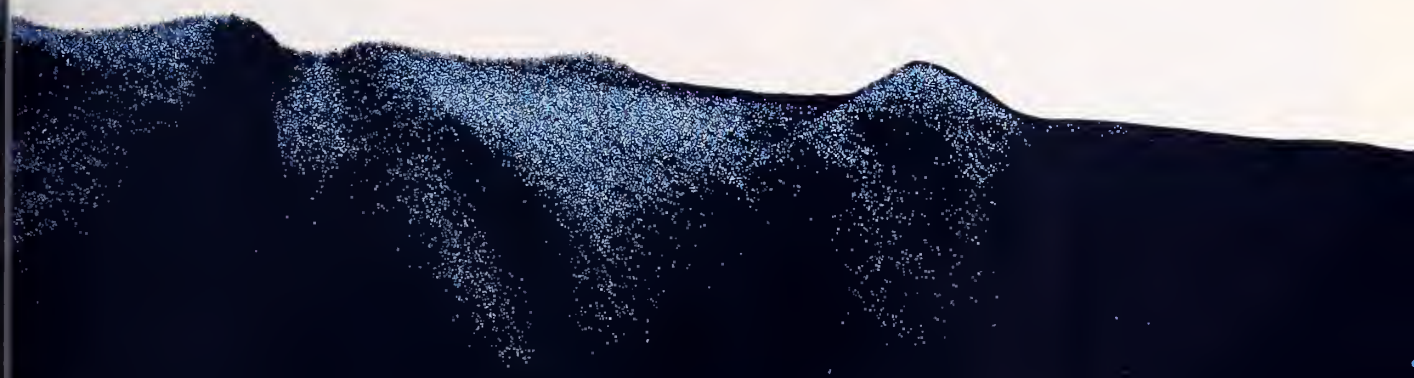
A special favorite* of West Virginia physicians in controlling childhood vomiting

WANS® CHILDREN SUPPRETTES™

rectal antinauseant/antiemetic

pyrilamine maleate 25 mg; sodium pentobarbital 30 mg
Warning: may be habit forming

*Based on usage by dosage form; data gathered by independent research organization.



RIPTION: WANS® Children: (Blue) pyrilamine maleate and pentobarbital sodium* ½ gr (30 mg) scored for ge. WANS® No. 1: (Pink) pyrilamine maleate 50 mg ntobarbital sodium* ¾ gr (50 mg) scored for ½ dosage. S® No. 2: (Yellow) pyrilamine maleate 50 mg and arbital sodium* 1½ gr (100 mg) scored for ½ dosage.

NING: may be habit forming.

RAINDICATIONS: Infants under 6 months. Acute ittent porphyria, known hypersensitivity to barbiturates histamines, known previous barbiturate addiction, hepatic impairment, CNS injury, senility, and presence ontrolled pain.

NINGS: Barbiturates may be habit forming. Pre-existing logic disturbances may be aggravated. Idiosyncratic ns may occur. Acquired sensitivity may result in allergic ns. Safety in pregnancy has not been established.

AUTIONS: Use cautiously with other sedative, hypnotic otic agents. Use with caution in patients with acute or hepatic disease, fever, hyperthyroidism, diabetes s, severe anemia, congestive heart failure, or a history dependence or suicidal tendencies. May impair ss and coordination with increased accident risk.

ADVERSE REACTIONS: Drowsiness, fatigue, vertigo, incoordination, tremor, muscle weakness, ataxia, hypotension, respiratory depression, delirium and coma. Dryness of nose, mouth, and throat, pupillary dilatation or blurred vision, urinary retention, abdominal pain, nausea, vomiting, diarrhea, and hypersensitivity reactions. Overdose may result in hallucinations, excitement, ataxia, incoordination, athetosis, convulsions, and death.

DOSAGE AND ADMINISTRATION: Rectally, children 2-12 years of age, one WANS® CHILDREN every 6-8 hours as required. Children under 2 years of age may receive ½ the above dosage. *Adults:* Rectally, one WANS® No.1 Supprette™ to inhibit mild nausea and/or vomiting; one WANS® No. 2 Supprette to control pernicious vomiting. Repeat doses for adults should be 4 to 6 hours apart, not to exceed four doses in 24 hours. Moisten finger and Supprette with water before inserting. Optimum dosage must be determined in each case by the clinical response.

WEBCON

Webcon Pharmaceutical Division
Alcon Laboratories, Inc.
Fort Worth, Texas 76101

AMERICAN LUNG ASSOCIATION

The "Christmas Seal" People

West Virginia Lung Association

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or

Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® relieve stuffiness, drip and congestion.*

*

INDICATIONS

Based on a review of this drug by the National Academy of Sciences–National Research Council and/or other information FDA has classified the following indications as lacking substantial evidence of effectiveness as a fixed combination: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses such as the common cold seasonal allergies, sinusitis, rhinitis conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying effect on respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy

WARNINGS *Use in children* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives tranquilizers etc

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension headache, faintness dizziness tinnitus, incoordination visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect anorexia nausea, vomiting, diarrhea, constipation, and epigastric distress

HOW SUPPLIED Light blue Extentabs in bottles of 100 and 500.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.;

A·H·ROBINS

when pain goes on... and on... and on–

For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen® with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

(III) Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A.H.ROBINS**

The MUDRANES

Discreet formulations of four well regarded drugs for the relief of bronchial distress—Potassium Iodide, Glyceryl Guaiacolate, Aminophylline, Ephedrine with Phenobarbital (to lessen cardiac stimulation).

INDICATIONS: For the prompt symptomatic relief of bronchial asthma, emphysema and bronchiectasis. The Mudranes dilate the bronchi and liquefy mucus plugs. DOSAGE: Tablet; One tablet with a full glass of water 3 or 4 times daily as required. Divide tablet for child's dose. Elixir; Children, 1 cc for each 10 lbs. of body weight. May be repeated 3 or 4 times a day. Adult, one tablespoonful 4 times daily. All doses should be followed with a glass of water.

CONTRAINDICATIONS: Aminophylline/Theophylline is contraindicated in the presence of severe cardiac arrhythmias and patients with massive myocardial damage. Ephedrine, in presence of severe heart disease, extreme hypertension, and in hyperthyroidism. Phenobarbital, in porphyria and in patients with known phenobarbital sensitivity. Potassium Iodide, in pregnancy (to protect the fetus against possible iodine-induced depression of thyroid activity), in tuberculosis (produces gumma dissolution), and in acne; also in the presence of known iodide sensitivity. PRECAUTIONS: Aminophylline/Theophylline should be avoided in patients with massive myocardial damage and/or severe cardiac arrhythmias. In children, overdose may cause vomiting, cardiac arrhythmias, and severe agitation. Ephedrine should be used with caution in the presence of severe cardiac disease, particularly arrhythmias and angina pectoris; avoid in hyperthyroidism and severe hypertension. Phenobarbital may be habit-forming. Avoid overdosage. Potassium Iodide: Discontinue in the presence of skin rash, swelling of the eyelids and severe frontal headache. Long use may cause goiter. ADVERSE REACTIONS: Aminophylline/Theophylline may cause nausea, cardiac arrhythmias, and aggravate severe myocardial disease. It may cause headaches and tachycardia. Vomiting and dizziness are not uncommon. Ephedrine: In patients hypersensitive to CNS stimulation, ephedrine may cause nervousness, tachycardia, extrasystole and ventricular arrhythmias. May cause urinary retention, especially in the presence of partial prostatic obstruction. Psychoneurosis may be aggravated. Pre-existing anginal pain will be aggravated. Phenobarbital may produce severe skin rash. Avoid overdosage. May be habit-forming. Potassium Iodide may cause nausea. Over very long period of use, iodides cause goiter. Discontinue if patient develops skin rash, eye irritation, eyelid swelling, or severe frontal headache.

HOW SUPPLIED: Mudrane and Mudrane GG available in bottles of 100 and 1000 tablets; Mudrane-2 and Mudrane GG-2 in 100s; Elixir in pints and half-gallons.

Federal law prohibits dispensing without prescription.

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23261

Pittsburgh , Pennsylvania

January 16-17, 1976

CARDIORESPIRATORY DISEASES OF COAL WORKERS

CO-SPONSORED BY

The American College of Chest Physicians; the U.S. Department of Health, Education and Welfare, Appalachian Laboratory for Occupational Diseases; the U.S. Department of Labor, Employment Standards Administration.

LOCATION

The Pittsburgh Airport Hilton Inn
Parkway West
White Swan Park
Pittsburgh, Pennsylvania

COURSE DESCRIPTION

You are cordially invited to attend a two-day symposium whose major goals are:

- To share with you our plans to prepare a physicians handbook on "The Cardiorespiratory Diseases of Coal Workers".
- To learn your needs in the treatment and counseling of coal workers.

The meeting will provide a forum for your comments and those of other invited participants.

While there will not be a registration fee for this course, registration will be limited to 50 participants. If yc wish to participate we urge you to act now. Complete and return the coupon below or call the Americc College of Chest Physicians at (312) 698-2200.

Please send registration information on "Cardiorespiratory Diseases of Coal Workers"

NAME _____

ADDRESS _____

CITY/STATE _____

ZIP _____

911 Busse Highway
Park Ridge, Illinois 60068
(312) 698-2200

american college of chest physicians

The West Virginia Medical Journal

Vol. 71, No. 12 December, 1975

The Hyperkinetic Snydrome

William B. Svoboda, M. D.

One of the more common pediatric problems seen by the physician is hyperactivity. The parent (or teacher) seeks the magic medication to transform the whirling dervish into an angel, and often is disappointed. A large share of this frustration is caused by the tendency to consider the hyperkinetic syndrome as a single entity rather than as a syndrome of multiple entities manifesting as similar symptoms. To handle the problem successfully, therapy must be directed toward the cause rather than the symptoms.

Definition and Clinical Manifestations

Hyperactivity, alias the hyperkinetic or Strauss syndrome, can be thought of as a disturbance in the sensory input between the child's environment and his thought processes. The symptoms are essentially motor expressions of the sensory imbalance. The degree of hyperactivity usually reflects the bias of the observer: a child who is described as markedly hyperactive by one person may be felt to be normal by another. The diagnostician must therefore consider the patient, the observers, and the various situations and environments to which the patient is exposed.

No matter what the etiology is, the symptoms are primarily in five major areas: (1) excessive, uninhibited, uncontrolled energy; (2) distractibility; (3) emotional hyperreactivity-lability; (4) misbehavior; and (5) poor social relationships with sibs, peers, teachers and parents.

Another common manifestation, primary or secondary, is a disturbance in learning. Although the most common method of describing the problems of hyperactivity is in terms of the quantity of deviation, i.e., too much or too little energy, it is more important to note the *quality* of this deviation from the norm. For example, rather than describing the child as distractible, or having a short attention span, it is diagnostically more helpful to note the type of inattention: inattentiveness to sight or to specific sounds, confusion brought on by specific stimuli, or shortened attention to specific stimuli, etc.

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An example of the above would be that of a child with a visual perceptual problem who, when faced with a visual task such as reading or writing, becomes hyperactive. When auditory stimuli are used as an alternative teaching method, the child becomes much calmer. One notices this child to be confused by visual stimuli, often trying to avoid these stimuli. He often will have his attention distracted to less threatening stimuli, or he will search the room for cues or escapes. A partially blind child may react in a similar fashion. By comparison, the child who has an auditory processing deficit is often keyed up to a hyperactive state when he has to depend on his weakness in school or in social interactions. Moreover, he is on guard and uses his eyes to check out each new intrusion into his environment. A superficial observer would label him as inattentive, but a good observer notes him to be visually overattentive in compensation.

Similarly, the energy excess is better qualitated than quantitated. By measurements, the total amount of activity over a day's time may be similar to a normal child's but, by observation, the energy and activity may be manifested as erratic bursts. To note the type of activity is important. Is it an aimless, haphazard activity, changeable from moment to moment, or is it goal-directed, as if the child were attacking his world?

It is not only the quality of the disturbed function that should be noted; the situation in which the abnormal behavior becomes manifest also should be observed. A hyperactivity that is manifested primarily in specific situations often is a hyperactivity that is pointing out a probable etiology within that situation.

Etiology

In various disciplines for approximately one-half of a century the principal symptoms of hyperactivity have been found in diverse types of problems. The common denominator amid these areas is that the areas all fall within the sensory input into the individual. Since this input is between the individual and his environment, we can arrange the major areas where a disturbance can produce hyperactive symptoms from environmental influences stagewise to the understanding mind:

(1) Environmental-Emotional or Psychogenic Types.

(2) Sensory Reception Problems (Visual or Auditory Handicap, etc.).

(3) Neural Alerting-Sensory Integration Problems.

(4) Receptive (and Perceptive) Language Processing Problems.

(5) Intelligence (Too Bright or Too Low).

Nearly all hyperactive children have emotional-environmental hyperactivity present but in not all cases is this the primary etiology. The response of the environment to a hyperactivity of another cause may create further emotional problems, namely, a secondary environmental hyperactivity. The examiner must exclude the other types of hyperactivity which might have anteceded the emotional or environmental hyperactivity.

It is easy to see why a blind or deaf child might be hyperactive, for he is partially excluded from a clear interaction with the world and thus must be dependent upon his remaining sensations with vigilance lest the world "sneak up" on him. It is like short-cutting through the graveyard on a cloudy night on the way home from the midnight horror movie — the shadowy inadequacy of vision allows every sound to become a fearful threat. In regard to the deaf (or partially so) child, high-tone hearing losses are more commonly associated with hyperactive behavior; however, low-tone hearing losses (as in a middle ear infection) which affect the normal speech range, may lead to hyperactive behavior in situations where the child must listen.

Disturbances in the arousal or neural attentive system have been associated with hyperactivity and indeed this type has been termed a problem of non-arousal. A tumor or stroke involving the reticular activating system of the upper brainstem and extending into the thalamic sensory afferent system may clinically manifest either as a hyperkinetic state, or in narcolepsy, or both. Both problems can be monitored by pupillography and both problems respond to stimulant medication. These are areas of the nervous system rich in catecholamine transmitters. Moreover, experiments with fetal monkeys who have been asphyxiated for over 12 minutes demonstrate a resultant hyperkinetic behavior and pathologic lesions involving primarily the sensory afferent nuclei of the upper brainstem and thalamus. Similar disturbances of sensory input between the thalamus and the cortex are now being considered as a major cause in another syndrome complex, the autistic child. With these considerations, one form of hyperactivity in childhood is felt related to disturbances in function of the same anatomic area, and this is the principal group that would be expected to respond to Ritalin or another stimulant.

Further efforts are being made to subdivide these subcortical disturbances as follows:

A *Fronto-Thalamic Inhibitory system disturbance* manifested as a keyed-up, verbal, immature but less misbehaving type, markedly responsive to Ritalin.

A *Fronto-Caudate Deficiency* with less activity which is more aimless in nature, with little accomplishment, and a superficial social awareness and brief attentiveness. Stimulants produce only modest improvement and tranquilizers induce a zombie state.

A *Temporal-Limbic System Hyperkinesia*, often involving the dominant temporal lobe with impaired audiovocal processing frequent. The IQ may be diminished. This is an impulsive, distractible, driven, destructive and aggressive hyperactivity, difficult to manage. Stimulants are of little help and tranquilizers may precipitate seizures.

The fourth level of hyperactivity is seen with *disturbances in receptive language processing*, either verbal or visual. In adults rendered aphasic due to a stroke, trauma, or tumor, those with a receptive or sensory aphasia are described as agitated, inattentive and confused; whereas, in those with an expressive or motor aphasia, the behavioral disturbance is more in the nature of a quiet, frustrated individual with explosive temper outbursts. A similar association of hyperactive behavior to the sensory-receptive stages of learning processing is seen in children. Approximately one-third of the children seen at our clinic for learning disabilities have been labeled as hyperkinetic elsewhere, yet only a limited number of these children have received any beneficial response to a stimulant. The majority have

exhibited no response or are aggravated. A child who has a learning disability as the cause of the hyperkinesia commonly has a perceptual disability, and occasionally it is a "receptive aphasia." A child who has a learning disability secondary to his hyperkinesia of another etiology more often has a scattering of learning weaknesses and strengths, often with a marked variability.

The fifth and last area of hyperactivity is that associated with *an excess or deficiency of intelligence* as related to the expectations of his parents and teachers. A retarded child or a child of high intelligence in a regular classroom may be hyperactive, for the retarded child is overwhelmed and the bright child is both bored and hungry for stimulation.

There are numerous isolated and popular reports of specific causes of hyperactive reactions such as megalovitamin needs, excessive, deficient or impure carbohydrate intake, fluorescent lighting, allergies, food additives, or various inborn errors of metabolism (fructosemia, histidinemia). These are rare causes, however, even when a firm correlation can be demonstrated. Though the parent seeks such a cause, especially after reading such a reported case in the popular literature, this search often serves to deny the real problem. Many times the identified problem only serves to accentuate or aggravate the basic hyperactivity unless a direct insult to the nervous system, as in demonstrated hypoglycemia, can be shown to exist. Even with allergies, the allergic reaction is usually episodic and only is an aggravant; also, the allergy may interfere with the hearing (serous otitis). Many children are allergic without hyperactivity.

In some cases it is clear that the etiology(s) of the hyperactivity is due to an acquired insult; in other cases, chiefly those presenting with a strong family history of others with a similar hyperkinetic problem, the problem is felt to be that of a developmental delay or underdevelopment. In those cases with other developmental delays such as in speech, in motor coordination, or in learning processes, the delay is also hypothesized though an acquired etiology cannot be firmly excluded. In many cases, however, the nature of the etiology cannot be determined.

Modifying Factors

Whatever the precipitating factors be and whatever the aggravating factors be, they are not directly proportional to the degree of hyperactivity. There are numerous modifying factors which alter the reactions of the child to the precipitating and aggravating factors. These principal modifiers are (1) the basic temperament of the child, (2) the external stresses on the child (and family) and the child's response patterns to these stresses, (3) the child's self-controls as well as the quality of the parent's control over the child, (4) the child' self-concepts as well as the parent's concepts and expectations of the child, and (5) the relationships between the child and his parents.

Diagnostic Approaches

As with many pediatric neurology problems, the history is by far the most valuable diagnostic tool and other procedures serve only to exclude other factors. The history must be weighted with emphasis on not only a survey of possible gestational-perinatal insults, postnatal neuromedical insults, or possible developmental deviations that may suggest possible etiologies, but also on a full survey of possible social, family, school and environmental contributors and potential modifying factors.

Since the more observations that are obtained the clearer the picture becomes, it is commonly of help to contact the school teacher for her observations in addition to interviewing both parents. A discrepancy in observations may indicate a strong situational factor to be further evaluated. During the interviews, the interactions between the parents and the child should be noted also. Even the observation of the parents and child in the waiting room is of great value.

The neurophysical examination should be aimed at more than just excluding localizing or abnormal findings; it should screen for the soft signs of developmental delays and should exclude any auditory or visual sensory handicaps. A brief survey of the child's mental abilities and performance, with a special concern for any imbalance, should be made. The interactions between the child and the examiner also should be noted, as well as the examiner's own emotional reactions to the child. The neural arousal type of hyperactivity often is "contagious" and the examiner often finds himself also "keyed up." The psychogenic (environmental) type of hyperactivity often frustrates and angers the examiner.

Further diagnostic studies are usually indicated by the history and physical examination. A basic urinary screening for metabolic errors often should be considered (a basic urinalysis augmented by both a Benedict's or Clinitest test for reducing substances and sugars as well as a Glucose Oxidase Dipstix for glucose, a test for acetone, a phenistix and ferric chloride test, and a dinitrophenylhydrazine test as a basic screen).

If the use of any stimulant or tranquilizer is contemplated, an EEG should be obtained as all these medications may precipitate seizures. Other instances indicating the need for an EEG include concern that the patient may be having seizures or progressive focal disturbances. It must be stressed that EEG's do not indicate cerebral maturation, intelligence, emotions or learning skills.

Further diagnostic studies such as formal audiometrics, formal visual evaluation, IQ testing, learning disability evaluations, etc., will be dependent on the basic findings.

Therapy

The aim of the therapy is to rebalance the relationship between the environment and the child's thinking. It must be remembered that in nearly all cases an environmental (emotional) cause is present and thus in need of help. In general, all aspects are in need of evaluation and all aspects found to be deviant need to be treated, not just the learning disability or the hearing problem or the emotional disturbance. In general, the therapy should be concentrated in four areas:

(1) Correct contributory neurologic or physical handicaps, including specific remediation to learning handicaps (if found) through specific educational approaches.

(2) Alter the environment, including the school and family situation, as necessary.

(3) Help and support the parents (and as needed, the teachers), for they have to live with the child.

a. The parents need a simple explanation, guidance, sympathetic support and availability. The mother needs an "escape" because too much togetherness often leads to accentuating the problem, whereas the brief separation of a few hours of relief may calm both parent and child.

b. The parents need to develop a firm, encouraging, calm, quiet and consistent handling of the child. This consistency must be the same, not varying, between the parents (grandparents or babysitters), and not altered from one day to the next, nor varying between times of crisis and of calm. Inconsistency is a diagnostic keystone suggestive of environmental problems as a major factor. The parent who, when tactfully asked who is in charge between her and the child, displays the hesitancy of uncertainty or insecurity, though her final answer be "I am," suggests indeed that, under a challenge, she may yield.

c. The child should never be rewarded for misbehavior, but rather should be encouraged toward deriving satisfaction and pleasure in good behavior. The parents will need to develop this type of positive goal to which to guide the child.

d. Especially in the earlier stages of therapy, regular routines should be established and surprises avoided whenever possible. Certainly, later, as part of the therapy training in adaptation, surprises should be included, just as earlier in therapy overly stimulating situations were avoided until the child was ready to learn how to handle them.

(4) Drugs are overused, especially in that they are often used as the sole therapy when indeed, even when effective, they should be used only as one portion of the therapy.

a. Stimulants, in theory and in practice, are principally effective in the disturbance-of-neural-arousal type of hyperactivity and tend to be aggravating or at best rather ineffective in the other types. One begins at a small dosage of Ritalin (or Dexedrine) and builds to the most effective dosage, monitoring to maintain a balance of effect throughout the day. Once established, at various intervals a trial at a slightly lower dosage is advisable. The goal of therapy is to develop self-controls as a replacement for medicinal controls. Caffeine (usually as coffee) is a non-prescription stimulant that may be tried. It is a weak substitute. The reports of its success have not been substantiated in this clinic, and indeed in those patients in whom some degree of success was seen, it had been suspected that their disturbance was not a neural-arousal type of hyperactivity.

b. Tranquilizers should be used only briefly as an initiation to psychotherapy or some other active counseling, and not as a prolonged therapy, for these medications suppress alertness and motivation, thus tending to inhibit optimum learning. Moreover, in the child maturing emotionally as well as physically, it is far more desirable to help him learn to handle the stress rather than covering it up with a medication. The need for tranquilization indicates the need to find out why the child needs to be tranquilized.

In the above types of hyperactive medications — stimulants and tranquilizers — one must be aware of side effects. Both types of medications have been associated with the precipitation of seizures, movement disorders (including also tics and tremors), dulling of intellect, drowsiness, loss of motivation and significant emotional disturbances. The stimulants especially have been associated with anorexia, insomnia, and the slowing of growth, whereas the tranquilizers

especially have been associated with hepatitis, blood dyscrasias and visual (lens and macular) disorders. Both have been involved in drug addiction problems. Neither drug type improves learning skills and both drugs are capable of depressing learning. Only the stimulants may improve learning behavior.

Radical surgical approaches, such as frontal lobotomy and bilateral anterior thalamotomy, have no place in pediatrics.

Prognosis

The primary long-range goal is that the child develop his own self-controls. Indeed, it is now becoming apparent that the child does not totally outgrow hyperactivity; he only develops better self-controls. In part, the hyperactivity itself may improve through some degree of maturation. Often this combination of self-control development and drive maturation occurs during adolescence. Basically, however, about 20 per cent of the adults hyperactive as children are described as restless adults.

Hyperactivity alone gives a good prognosis. A history of social adjustment problems, such as sociopathic or psychotic behavior, gives a very guarded prognosis. Early antisocial behavior (lying, stealing, running away) or undesirable family factors (a disturbed family background such as alcoholism or parental antisocial behavior, or inconsistencies of discipline) suggest a rather poor prognosis unless these can be altered.

Summary

Effective therapy of hyperactivity depends on the effort to analyze adequately the quality as well as the quantity of deviation from normal in areas of activity, attentiveness, emotions, social interactions and behavior. The therapy must be aimed at the principal cause-types, namely environmental (emotional), sensory handicap, neural arousal, and receptive language processing or mentation, though modifying and aggravating factors must be considered. Therapy must be expanded to include *all* problems identified (and usually these are multiple). Therapeutic approaches include (1) correcting any identified handicaps of learning, primary or secondary, (2) altering the child's environment as necessary, (3) counseling and guiding the parents in their management of the child, and (4) limited and specific usage of drugs, namely, stimulants as specifically indicated, and tranquilizers only as a temporary initiation to counseling. The success of therapy often reflects the adequacy of the evaluation and approaches.

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Megaloblastic Anemia In The Management Of Severe Psoriasis*

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THE management of severe, disabling pustular psoriasis with methotrexate and hydroxyurea is effective but relatively dangerous as compared to traditional therapy. These new procedures using the antimetabolic drugs have required continuous study by a special task force of the National Program for Dermatology. It has been established that if patients are selected properly and if they are managed by the guidelines of the task force, then the disability can be controlled reliably with the minimum of risk. Our management of the severely disabled patient described here illutsrates the principal techniques and precautions in the use of these powerful drugs for psoriasis. To illustrate the problem of the complications encountered we describe the megaloblastic anemia which may be induced by either methotrexate or hydroxyurea by different biochemical pathways,[1] but which must be managed so as not to aggravate or worsen the psoriasis.

Case Presentation

Ms. M. P. is a 50-year-old woman who has been followed by our dermatology department since 1963 for severe, pustular psoriasis covering most of the body. Her pustular psoriasis began at birth with an eruption on her back which seemed to clear with sunlamp therapy. Several days later she developed a generalized eruption, which, when treated with some unknown medication, gradually subsided. Her course was one of continual exacerbations and partial remissions, but at no time through grade school or high school was she free of the disfiguring disease. In her mid-twenties, she had a tonsillectomy which was followed by severe exacerbations of psoriasis, requiring daily injections of some undesignated hormone and ACTH. Control was finally achieved some four months later and she remained totally free of psoriasis from 1951 to 1961. Her psoriasis reappeared in 1961 at age 38, a typical age for the onset of persistent psoriasis. She was treated by a dermatologist where she lived prior to her moving to Columbia, Missouri, at which time she began coming to the University of Missouri Dermatology Clinic.

Despite aggresive therapy using methotrexate, since 1963 she has had over a dozen hospitalizations and has been fully bedridden with pustular psoriatic erythroderma several times. Various lines of topical treatment did not help. The severity of her disease and lack of response to conservative care necessitated the use of methotrexate, which was given in doses of 15-30 mg. orally or intramuscularly almost weekly. Our technique is to use a pulse of methotrexate (five mg. every 12 hours for three doses) once a week monitored by monthly hematologic and liver enzyme studies and yearly liver biopsies, none of which ever has been grossly abnormal. In 1968, Enovid was prescribed for a menstrual disorder. Although her psoriasis was improved with methotrexate, no stable remission was achieved. In 1972, she was hospitalized for evaluation and treatment of one complication, megaloblastic anemia.

The anemia was most severe during June, 1972. In August, 1972, the following laboratory studies were abnormal: hematocrit 23 per cent, MCV 127 cubic microns, MCH 141 micromicrograms, MCHC 32 per cent, BSP 11.3 per cent retention, reticulocyte count 2.8 per cent, bone marrow megaloblastic changes and hypercellular, and a low serum folate level (3 nanograms). A Schilling test of 73 per cent excretion indicated relatively normal body B_{12} levels. Importantly, the Schilling test was followed by a six-day elevation of reticulocyte count to a maximum of 6.8 per cent—a phenomenon often encountered when Vitamin B_{12} is given to a folate deficient person.

We decided this woman's megaloblastic anemia was probably secondary to methotrexate therapy so we utilized a folinic acid recovery. If given first, folinic acid can completely block the effect of methotrexate. She was given methotrexate five mg. intramuscularly for two days in a row followed by one mg. folinic acid given intramuscularly 24 and 48 hours after the second dose of methotrexate, the above schedule being repeated

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at weekly intervals. Even this low dose of folinic acid lessens the effects of methotrexate, especially on normal cells. Two weeks later, after being discharged from the hospital, she was started on a regimen of methotrexate five mg. twice daily on Wednesdays and folinic acid two mg. on Fridays. By December 7, 1972, her red cell indices revealed she had a microcytic hypochromic anemia as is occasionally found to be hidden by a megaloblastic anemia when the latter is corrected.

Throughout this period, her pustular psoriasis slowly grew worse, necessitating an increase of her intramuscular methotrexate to 15 mg. weekly. Her folinic acid was also increased to a dosage of three mg. IM weekly. The folinic acid was stopped in March, 1973, because we became concerned for every possible cause for the worsening of her skin. Methotrexate was continued in weekly doses of 15-25 mg. IM and her skin condition gradually improved until December, 1973, when she quit work and went to live with her sister in another state. Her new dermatologist successfully replaced her methotrexate with one gm. of hydroxyurea daily. When seen here in March, 1974, her red cell indices again were megaloblastic and in April, 1975, while still using hydroxyurea, her indices were about the same and her psoriasis was improved. Folic acid does not relieve the effects of hydroxyurea, nor is the megaloblastic anemia induced by hydroxyurea, due to folic acid deficiency. Both methotrexate and hydroxyurea appeared equally helpful for this patient's psoriasis and, with each drug, when she reached maximum benefit her red cells were maximally megaloblastic.

Discussion

All patients disabled by psoriasis and unresponsive to well-designed therapy of traditional types should be evaluated for treatment with antimetabolic medications. Psoriasis is not always a benign disease, but can be totally disabling or even fatal in the severe forms. This patient, without methotrexate, may well have died and would have been bedridden at best. However much the benefit, the complications of these powerful cell poisons are many and complex. Patients with mild or moderate psoriasis should not receive methotrexate or hydroxyurea.

Methotrexate interferes with dihydrofolate reductase, an enzyme system which forms dihydrofolate and tetrahydrofolate. The coenzyme forms of tetrahydrofolate are involved in the metabolic transfer of various one-carbon units in several biochemical reactions, including the synthesis of thymidylic acid, an essential component of DNA, and of inosinic acid, the precursor of adenine- and guanine-containing nucleotides of RNA and, eventually, DNA. The major side effects occur in the gastrointestinal tract and bone marrow. Severe hemorrhagic desquamating enteritis with perforation has been reported as has severe aplastic anemia. Less severe side effects include anorexia, progressive weight loss, leukopenia, depression, ulcerative stomatitis, diarrhea, alopecia, dermatitis, coma, and hepatic dysfunction, which is usually reversible, but which may eventuate in cirrhosis. The only side effects present in our patient are megaloblastic anemia, a mild diffuse alopecia, and very mild hepatic dysfunction manifested by a BSP of 11.3 per cent retention on one occasion, associated with occasional slight elevations of the SGOT, LDH and SGPT. In addition, the two liver biopsies within the past four years have been Grade 1, which does not require discontinuation of methotrexate according to the accepted guidelines of the National Program for Dermatology's recommendations for the use of methotrexate in psoriatic patients with resultant liver damage.[2]

Interestingly, the megaloblastic anemia in our patient came during her best remissions. I would like to speculate that, in addition to the inhibition of mitosis which methotrexate mediates, the RBC size may also be influential in influencing the course of psoriasis. Normally, RBC's are biconcaved discs seven and one-half microns in diameter. A mean corpuscular volume of 127 cubic microns represents at least a 30 per cent increase in the RBC size. Perhaps these changes decrease the ability of the RBC's to negotiate the capillaries and thus may decrease the total amount of oxygen delivered to the basal layer. Relative anoxia could further limit the mitotic activity in a basal layer already under the inhibition of methotrexate. The correction of her anemia therefore required additional antipsoriatic therapy to maintain a remission. This unusual paradox illustrates one more problem in the management of severe psoriasis.

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Infectious Diarrheas

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DIARRHEA is a problem second in frequency only to respiratory tract infection that brings the patient to the physician. Infections that cause frequent, loose, or watery stools are disabling because of inconvenience, but more important, because of feared consequences of massive water loss and electrolyte imbalance with subsequent vascular collapse or destructive inflammation of a large body area. The cause of most cases of gastroenteritis are several undefined agents, possibly viruses, that can pass through filters smaller than 60 millimicra, but not through those that are 20 millimicra in diameter. The syndromes they produce include sporadic and epidemic nausea and vomiting, winter diarrhea, and epidemic diarrhea and vomiting. Other infectious causes of diarrhea which can become debilitating and sometimes life-threatening are bacteria, some of which can be and often need to be treated to reduce morbidity and mortality.

During the past several years, the various diarrheal syndromes have been better defined so that effective treatment is more often available. The discussion that follows involves a brief delineation of the factors normally present that protect us against infection of the gastrointestinal tract, and an account of the ways in which certain bacteria produce disease in the bowel so that the methods of therapy can be deduced.

Mechanisms of Protection

Gastric acidity. The acid pH of the normal secretions of the stomach prevent most ingested bacteria from surviving, although salmonella can remain viable for as long as 30 minutes. In both animal and man, bicarbonate ingested with *Escherichia coli* or *Vibrio cholerae* allows infection to occur that would not otherwise take place. The effectiveness of gastric acid as a barrier to infection is overcome when large quantities of bacteria are ingested or when the ingested bacteria are of unusual pathogenicity. For example, *Shigella* are infective in quanties of 100 to 1000 organisms/ml., whereas 10^5 *Salmonella* and 10^8 *E. coli* or *V. cholerae* are the minimal infective doses.

Intestinal motility. The constant motion of the small bowel ensures bacterial dilution and reduces the opportunity for attachment and invasion. Its protective value is more easily recognized by what happens in its absence than what is prevented by its normal presence, as in the case of opiate administration for the treatment of *Salmonella* enteritis, where their use seems to cause, or at least to be associated with, the development of bacteremia.

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Normal flora. The normal bacteria of the bowel represents a much maligned population. Under provocation of unusual severity they have caused disease; but in the intact small bowel and colon, they are capable of a number of beneficial effects which have been reviewed extensively by others.

IgA. This secretory copro-antibody prevents the adherence of *V. cholerae* to the intestinal mucosa in humans, and it is reasonable to presume it has the same effect against other pathogens. In experimental animals, there is a definite relation of resistance to *V. cholerae* and copro—but not circulating—antibody levels. Hornick and Dupont have found that orally administered enteric vaccines stimulate an intestinal antibacterial substance which subsequently prevents multiplication of ingested virulent organisms. This substance may be antibody produced in the intestine. In general, since antibody is a major component of the host protective mechanism in other parts of the body, it is reasonable to assume that a similar role exists in the gut.

Pathogenesis of Bacterial Diarrheal Syndromes

There are three basic mechanisms for the production of diarrheal disease (Table 1): (1) toxin

TABLE 1

Pathogenesis of Bacterial Diarrheas

Pathogen	*Bacteria-Intestinal Mucosal Interaction*	*Pathogenic Mechanism*	*Intestinal Localization*
V. cholerae *E. coli* types	No invasion	Enterotoxin production	Small bowel
Shigella *E. coli* types	Penetration, intraepithelial multiplication	Mucosal inflammation with destruction	Early small bowel Later colon
Salmonella	Complete penetration epithelial cell	Inflammation of the lamina propria	Small bowel and colon

formation in the lumen of the bowel as the result of proliferation; (2) bacterial invasion of the mucosal cells of the intestinal lumen with or without destructive inflammation; and (3) a combination of toxin-formation and inflammation due to invasion.

(1) Enterotoxin: The toxin produced by *V. cholerae* is similar in pathogenic effect to that of *E. coli, Shigella, Clostridia perfringens* and certain *Pseudomonas* strains. It is also serologically related to *E. coli* toxin and possibly to the others. These toxins are heat- and acid-labile so that both cooking food and gastric acid inactivate them. Enterotoxins have been studied extensively in recent years, especially with regard to the diarrhea resulting from cholera infection and that due to *E. coli, Shigella, Cl. perfringens,* and *Pseudomonas.* While the mechanism of action of the separate bacterial toxins is similar, they differ in potency. The toxin of *V. cholerae* is probably the most potent and is 10 times as diarrheagenic as that of *E. coli.* Their effect is to provoke the secretion of a large volume of protein-free small bowel fluid which is isosmotic with plasma without producing any recognizable abnormality in the mucosa, although there is capillary dilation and edema at the tips of the villi, where both secretory and absorptive processes are found. The result is a flow of water out of the bowel against osmotic potential because of the inhibition of ion transportation. Sodium is not reabsorbed and results in an associated loss of bicarbonate and chloride. The effect is mediated by cyclic 3′5′ AMP similar to that provoked by theophylline which inhibits the breakdown of cyclic AMP by action on the enzyme phosphodiesterase. The effect of cyclic AMP upon mucosal sodium absorption is prevented by glucose; therefore, the administration of sugar solutions promotes reabsorption of sodium despite the presence of enterotoxin and has been effective as a means of stopping the profound water loss in cholera. Diarrhea in cholera, possibly *Vibrio parahemolyticus* infection, *E. coli* "inappropriately" colonized in the uper bowel, and in some cases of *Shigella dysentery,* appear to be related to this pathogenetic mechanism of toxin action. Other toxins are thought to be involved in the diarrhea of *Staphylococcus aureus* and of *Bacillus cereus.*

(2) Bacterial invasion: Some species causing diarrhea do so by their ability to invade the epithelium of the intestine. Some of these are also toxin producers (*E. coli* and *Shigella*).

The lesion of *Shigella* infection is within the mucosa and wall of the large bowel. An extensive polymorphonuclear infiltrate is associated with epithelial cell destruction, capillary thrombosis, microabscess formation, but usually no penetration of the lamina propria. Bacteremia is known to occur but is uncommon even though the entire wall of the bowel is edematous. The extent of mucosal injury is sufficient to cause shaggy ulceration and to produce both pus and blood in the liquid stool.

Salmonella causes a different response which differs between strains. Those most likely to cause diarrhea cluster around the brush border within three hours after ingestion, invade and multiply within the epithelial cells within seven hours, and later are found to be associated with abscesses that are present in the base of villi whose upper tips were invaded. The end result, visible in 18 hours, includes blunting and swelling of the villi, especially those overlying lymphoid follicles and bacterial multiplication visible both within villi, the interstitium, and the lamina propria. The diarrhea provoked by this process is generally water and, though not associated with enterotoxin, is often similar in character to that of cholera.

Enteropathic *E. coli* in the newborn infant often produce inflammatory lesions within the small bowel. The organism does not always cause exudative reactions, though they are capable of widespread bacteremic dissemination.

Types of Bacterial Diarrheas

1. *Cholera*: In cholera the disease is mediated exclusively by the toxin whose effect is only partially explained by its role on sodium reabsorption in the small intestine. Vomiting is pronounced in most cases and patients with it have almost pure cultures of the vibrio in every part of the GI tract from the mouth to the anus. Vomiting is often accompanied by no nausea so that the patient often denies any upper gastrointestinal symptoms while at the same time periodically regurgitating large volumes of fluid in almost explosive fashion. Water loss from the bowel is measured in liters per hour in most cases. Some will have no diarrhea though their bowels are quickly filled with a watery fluid on which mucosal flecks float like particles of rice. The fatal outcome of cholera is the result of water loss, dehydration, and reduced renal blood flow due to depleted intravascular volume and hypotension, with death occurring in many after the diarrhea has subsided but as a result of acute tubular necrosis and renal failure.

2. *E. coli, Shigella*: Such stools and water loss are also an occasional result of infection caused by *E. coli* and *Shigella*; but, as a rule, it is only part of a syndrome in which other signs of in-

fection are also present. These organisms, in addition to producing toxins, invade the mucosa and produce a polymorphonuclear exudate in the submucosal layers above the lamina propria. Fever, painful distension and violently painful abdominal cramps are common to infection caused by either. In infants with *E. coli* dysentery, bacteremia is an additional complication. The stools, though watery, also contain blood, pus cells, and mucus. Enterotoxin producing *E. coli* are more apt to cause diarrhea in infants than older children or adults and are present in up to seven per cent of normal unaffected people in older age groups. Disease is presumably dose related. Ingestion of 1×10^{10} *E. coli* of the enteropathic types causes watery diarrhea in adult volunteers, often without fever, lasting usually for only a few days and beginning on the average of 26 hours after ingestion. In the infant, the effects of water loss are more pronounced and the additional problems of local inflammation, peritonitis and of disseminated bacteremic disease occur.

3. *C. perfringens* is a cause of diarrhea of an intensity that ranges from mild to fulminant with gangrenous enteritis. The organism is consumed in contaminated meat that has been cooked and allowed to cool before being eaten. The resultant illness is due to a combination of toxin and the local effect of bacterial invasion. At its worst, paralytic ileus, segmental gangrene, and perforation of the necrotic bowel defy all attempts at treatment. A number of clostridial toxins are involved, including an enterotoxin causing water diarrhea. Treatment has been most successful in severe forms of clostridial enteritis (also called Pig bel and darmbrand) when surgical resection of gangrenous bowel is accompanied by type C antitoxin and antibacterial therapy. In one study, the mortality rate was 40 per cent for those treated surgically alone or with pooled clostridial anti sera, and 18 per cent when specific antitoxin was used.

4. *Staphylococcal Enteritis* (food poisoning): The enterotoxin of the Staphylococcus exerts its effect whether consumed in pastries or other foods or endured during the course of bacteremia or other infectious processes. It differs from the enterotoxin of the bacteria discussed above in that it is a protein, heat- and acid-resistant and with far greater toxicity when given intravenously than orally. Four antigenically distinct types are known. The specific effect is unclear though I^{131} labelling shows concentration of intravenously administered toxin in the mucosa of the stomach and small bowel. Presumably the action it exerts on the stomach and intestine is the result of a local cholinergic effect. The syndrome produced by ingestion of the toxin may develop within an hour to an hour and a half. Violent nausea, vomiting and profuse diarrhea occur together, last for up to six hours, and finally subside. It should not be confused with the enterocolitis caused by *S. aureus* in which toxin effect is absent and the syndrome is due to invasion, proliferation, and mucosal destruction by staphylococci. It occurs generally as a consequence of disruption of the normal bowel flora. Its development in the postoperative period following colonic resection led Altemeier and others to discard preoperative intestinal antisepsis to avoid its often fatal consequence. It has not been confined to surgical procedures and has occurred following the administration of antibiotics to patients with infection. Its development after the use of tetracycline suggests that it depended less on the obliteration of all other bowel bacteria than on the removal of some. The diagnosis is easily accomplished by looking at a gram stain of stool which will show a collection of pus cells, red cells, debris and a large number of staphylococci to the exclusion of most other bacteria. Treatment is ordinarily swiftly effective and consists of discontinuing antibiotic therapy when this is possible and replacing fluid loss. A nonabsorbable antistaphylococcal agent such as Bacitracin or Vancomycin can be used as can other antistaphylococcal preparations such as the semisynthetic penicillins.

5. *Other organisms*: Other bacteria that cause diarrheal syndromes related to toxin release within the lumen of the small bowel include *V. parahemolyticus* and possibly *Bacillus cereus*.

V. parahemolyticus is one of the most common causes of diarrhea in the Far East, yet is unlisted in most western textbooks. It causes 60 to 70 per cent of summer diarrhea in Japan with from 12 to 15,000 cases of infection reported on a yearly basis. The organism has a rapid generation time and grows on or in raw fish. It has also been found in Chesapeake crabs. Freshly prepared and eaten fish rarely cause trouble. Diarrhea may resemble rice water stools or contain blood and mucus. In Calcutta the death rate is 10 per cent or more and justifies treatment with chloramphenicol for patients at high risk.

B. cereus is not regarded as pathogenic. Recently severe, short-lived outbreaks of vomiting and profuse diarrhea have been attributed to it in London as a consequence of consumption of contaminated fried rice obtained in some Chinese restaurants. The rice was served first in bowls to diners who often consumed only a portion of it. The remaining rice was returned to the kit-

TABLE 2

Clinical, Epidemiologic, and Laboratory Findings in Bacterial Diarrheas

ve m	*General Distribution*	*Age Group Principally Affected*	*Transmission Patterns*	*Abdominal Pain*	*Vomiting*	*Diarrheal Dysentery*	*Incubation Period (Hrs.)*	*Extra-intestinal Manifestations*	*Fecal Leukocytes*	*Infective Dose of Enteric Pathogens*	*Treatment*
ie	Global	Children	Custodial Institutions	+	±	+/+	24-72	Seizures, meningismus	++++ polys	10^1-10^2	Ampicillin Tetracycline
	Global	Newborn	Hospital nursery	±	0	+/0	24-72	Minimal-variable	Toxigenic absent	10^{-5}	± antibiotics
erae	Asia and contiguous areas	All	Food	0	±	+/0	24-72	Hypokalemic nephropathy shock	Absent	10^{-8}	Tetracycline
hemo-	Japan	Adults	Raw shellfish	+	+	+/0	12-36	Minimal	Absent	Toxin	None
ellae	Global	All	Prepared food, poultry, egg products	±	±	+/±	12-36	Fever, bacteremia	Typhoid ++ monos, non-typhoid ++ polys	10^{-5}	Typhoid—Chloramphenicol, Ampicillin Non-typhoid—None
lium gens	Global	Adults	Cooked meat	++ ++	± +	+/0 +/+	8-15 18-48	Minimal shock	Absent	Toxin	Surgery Penicillin Type C gas gangrene antiserum
ococci oison-	Industrialized nations	All	Prepared food	± +	++ ±	+/0 +/+	4-8 indeterminate	Minimal shock	Toxigenic absent Entercolitis ++++ polys	Toxin	None Bacitracin Vancomycin

chen and emptied from the bowls, brushed into a pan and fried for use by later customers. In the rice, and in the stools and vomit of those with gastroenteritis, large quantities of *B. cereus* were recovered.

Table 2 lists various features of the important causes of infectious diarrheal illness occurring in the United States.

The clinical manifestations of *Shigella* infection include abdominal pain, diarrhea, tenesmus, bloody mucoid stools, and fever. Fever is generally more prominent early in the disease and the above clinical symptoms nearly always reflect involvement of the colon. Numerous polymorphonuclear leukocytes can be found on direct examination of fecal smears. Shigellosis is usually transmitted from person-to-person contact although common source outbreaks do occur as a result of contaminated food or water.

In patients with clinical dysentery and negative stool cultures for *Shigella,* invasive *E. coli* strains should be suspected as a possible etiology.

Typhoid fever is a rare disease in this country and is not usually associated with diarrhea. Abdominal pain, constipation, and high fever usually occur and one may find large numbers of mononuclear cells in stool smears.

Gastroenteritis is the most common clinical expression of non-typhoid salmonella infection in man. Eight to 48 hours following the ingestion of contaminated food, fever, nausea, and vomiting followed by abdominal pain and watery diarrhea occur. If one examines fecal smears, polymorphonuclear or mononuclears will be variable. The disease is usually self-limiting, lasting a few days; blood stream invasion is rare.

There is no doubt that viruses can cause acute diarrhea and may cause widespread epidemics among institutionalized or congested populations and also probably are important causes of sporadic outbreaks of acute diarrhea generally lasting less than 48 hours. Diarrhea can be caused by ECHO viruses as demonstrated by laboratory outbreaks occurring in adults, and has been shown to cause epidemic diarrhea in newborn nurseries. *Coxsackie B* and poliovirus type 2 are other enteroviruses that have been implicated in causing diarrhea. Diarrhea is a common symptom in malnourished children with measles and chickenpox, and inflammatory changes in the intestinal mucosa of such children have been reported. Examination of fecal smears in viral

diarrheas have shown no leukocytes, and sigmoidoscopy and rectal biopsy have indicated an absence of colitis.

Treatment

For most cases of transient diarrhea, no treatment is required. The patient who sees a doctor is often given medicine to slow intestinal peristalsis and to reduce the discomfort of cramps, an approach which solves neither enterotoxin-induced water loss, nor that of bacterial invasion of the wall of the bowel. For profuse, frequent watery stools, whether accompanied by abdominal cramps or fever, the principal need is fluid replacement, not drugs such as lomotil which retard gut motility. Diarrhea in such cases should be viewed as a protective mechanism. Fluids, whether given by intravenous infusion or by mouth, should replace electrolyte loss and supply glucose to supply calories and promote absorption of sodium. Orally administered solutions reduce fluid loss and diarrhea; intravenous solution has no effect on diarrhea, but restores fluid volume. The fluid loss in cholera is also reduced quickly by tetracycline therapy.

Evidence of bacterial invasion is supplied both by such systemic responses as fever and other signs of infection and by the presence of pus cells in the stools. Table 3 lists in what types of diarrhea we find fecal leukocytes. A smear of the diarrheal stool examined either as a wet, unstained preparation, or with Wright's stain, is a useful office, emergency room or hospital procedure. No patient ill enough to be admitted for diarrhea or to go to an emergency room should fail to have such an examination. Cultures taken may reveal the organism within 24 to 36 hours, but the doctor forewarned by the character of the stool smear can plan treatment intelligently before the results of the culture are known. Tables 4 and 5, respectively, list some important indications for stool cultures and some important considerations in taking stool cultures.

TABLE 3

Diarrheal Diseases Associated With Fecal Leukocytes

Disease	*Predominate Cell Type of Fecal Leukocytes*
Shigellosis	Polymorphonuclear leukocytes (PMN)
Salmonellosis	+ PMN
Typhoid Fever	Mononuclear cells
Invasive *E. coli*	PMN
Allergic diarrhea	Mononuclear cells
Healthy controls	None
Cholerae	None
Viral diarrhea	None

TABLE 4

Indications for Stool Culture

1. Epidemic diarrhea in situations in which sanitation facilities have been impaired (hurricanes, earthquakes).
2. Epidemic diarrhea in closed environments (jails, orphanages, military camps, nurseries).
3. Epidemic diarrhea or individual cases of diarrhea in which clinical manifestations are severe (diarrhea sufficient to require fluid replacement, bloody diarrhea, illness lasting more than three to five days).
4. Diarrhea in patients exposed to the same possible source of contamination (people having attended a party, eaten in a restaurant, consumed canned meat from a common source, or received milk from a common supplier).
5. Moderate or prolonged gastroenteritis in especially susceptible persons (patients on antibiotics, especially broad spectrum, postoperative patients, patients with partial gastrectomies, aged and debilitated persons, and infants and children).
6. Fever of unknown cause, especially with a typhoidal syndrome.
7. Extraintestinal infections (with or without a history of gastroenteritis) such as septicemia, osteomyelitis, and endocarditis in which no organism has been identified or the identified organism is a primary enteric pathogen.
8. Individual cases with diarrhea or nausea and vomiting accompanied by fever above 38.5°C for more than 24 to 36 hours.

Table 5

Important Considerations in Taking Stool Cultures

1. Obtain samples for culture prior to antibiotic therapy.
2. Epithelial shreds, blood, and mucus are the best materials for culture.
3. Material may also be aspirated from a diseased area at proctoscopy.
4. The material should be smeared and placed in culture immediately. Polymorphonuclear leukocytes in the smear usually indicate a bacterial cause and certain organisms may be identified.
5. The sooner freshly passed material is placed in the medium, the greater is the chance of isolating the offending organism.
6. Cultures of several stools yield more positive results.
7. The specimen material should be put into a neutral glycerol solution for preservation if it cannot be cultured within two hours.
8. When stool cultures are taken, blood should also be cultured because of the possibility of accompanying bacteremia.

Antibiotics should not be used in the treatment of *Salmonella* gastroenteritis since antibiotics may convert simple carrier states or cases of gastroenteritis to systemic disease with bacteremia, prolong postconvalescent excretion of salmonel-

lae, and encourage the development or selection of resistant strains. In the case of shigellosis, ampicillin or tetracycline will shorten the clinical disease and decrease the postconvalescent excretion of the infecting strain. Drugs which retard motility such as lomotil or paregoric should not be used in individuals who have an invasive pathogen (ones with fecal leukocytes), which are caused by *Shigella*, certain *E. coli*, or *Salmonella* strains.

Antibiotics should be used in severe infection as demonstrated by systemic involvement.

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When All The Tests Are Negative

David J. Withersty, M. D.; and P. B. Porterfield, ACSW

For the family physician, negative laboratory findings mean that the suspected pathology is probably not present or, at the very least, that the differential diagnosis has been narrowed. While the patient and family are usually relieved to find that the tests have not supported their fears of "cancer" or "impending death," this is not always true. In those instances where so-called "good news" is met with anger, panic, or tears, the physician should be aware of what may be happening. The possible meanings behind such responses and suggestions for dealing with them comprise this article.

Many physicians will admit that the patient who consistently presents with somatic complaints in the face of repeated negative evaluations poses a problem. How does one help an individual whose requests for help are disguised in somatization? Furthermore, how does one keep one's own level of frustration (He's nothing but a crock!) under control in order to read the admittedly confusing signals? The consequences of not doing so can be detrimental. One cannot help but wonder if the spiraling use of minor tranquilizers and the ever increasing cases of addiction are not related to this difficult problem.

Somatization as a Cover

It is well known that patients will sometimes use a symptom as an entree to a physician's office in order to discuss marital, sexual or emotional problems. The conscientious, busy physician who gets to work immediately in the diagnosis and treatment of the presenting problem may be unaware of the motivating situation. When the tests are completed and the results prove to be negative, the patient may panic at the thought of being discharged when he or she has not yet been able to approach the doctor about the true problem.

The type of reaction just described might be alleviated or avoided by more personal questioning during the initial interview. If this has not been done (and indeed it may be difficult to do in a busy family practice) one can, at the time of the "panic" reaction, try to reassure the patient and provide him with a bridge for opening the discussion. One might suggest that, while negative test results only rule out major physiological disturbances, there are other reasons such as family or work problems that can result in physical symptoms. He might then ask such a direct question as, "Can you think of anything that is going on in your life now that might be causing tension?" The physician's attitude here is of paramount importance. If he can relate to his patient the feeling that it is quite natural to react to emotional stress with physical symptoms he is more likely to elicit information from the patient. If he says something like, "Perhaps you should seek psychiatric help," he will probably be unsuccessful in any further attempts to help. This is especially true if the patient and his family already suspect that the symptoms might stem from an emotional basis.

The "soft" approach frequently brings forth a history of problems in relating to family members or fellow employees. The result of the interpersonal conflict is usually anxiety, depression or both, and thus the presentation with somatic complaints. Discussion with the patient and the family, antidepressants and low doses of a major tranquilizer as an anti-anxiety agent (minor tranquilizers can be addicting if used for prolonged periods of time) often prove beneficial. Many times family counseling without the use of psychotropic drugs is successful.

Psychiatric referral, while seldom needed, might be a consideration, but, as has been previously indicated, this is a suggestion which can send a patient into further panic unless the physician takes care to explain that getting psychiatric help does not mean that a person is "insane" (frequently a concern of both patient and family). In most instances, the family physician can, by pursuing the matter of personal difficulties in the patient's life, discover in a relatively short period of time information which will prove vital in deciding the proper handling of the case.

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Primary and Secondary Gain

Some individuals who are trying without success to get their needs for love, concern, and attention met discover that a symptom often results in attention from family and peers, at least for a limited period of time. The secondary gain, as the attention is often called, acts as a reinforcement for the person to persist with his or her symptomatic behavior. The physician who insists that his evaluation of the complaints has revealed no physical basis threatens a very basic need of the individual and the result is often an angry, irrational outburst.

Just as the individual family member can develop symptoms for secondary gain and then react with violent hostility when confronted with negative laboratory results, families undergo a somewhat similar process. As Lesser and Stewart have pointed out, changes in the family may result in a crisis type of situation.[1] In an attempt to maintain an emotional or psychological equilibrium the family may unconsciously lock into a maladaptive system wherein one member is the "sick" one. "Scapegoating," as this process is called, may be said to result in the primary gain of emotional equilibrium for the family. Bauman and Grace describe a process wherein "an individual who has difficulty in changing the direction of role-relationship may use a situation involving illness as a fulcrum or wedge to change the direction of the family."[2] While agreeing with Bauman and Grace, one might also state that the family that is having difficulty with the various role-relationships of its members may use a situation involving illness (even psychosomatic illness) manifested in one member in order to change the direction of a family unit that is felt to be disintegrating.

Attempts to alter this pattern by proclaiming the "sick" one "well" may result in apparently illogical and irrational responses. The scapegoating process is often difficult to deal with and usually requires long-term family therapy. Often, the family is reluctant to engage in psychotherapy and address the various crises (as perceived by the family) as they occur. The advice of Bauman and Grace to involve the entire family rather than just the identified patient appears to be sound.

> "By seeing a single patient, the physician may inadvertently upset the homeostatic balance of the family and precipitate adverse consequences which are not in the family's best interests. Such an inadvertent pitfall is one in which the physician becomes involved with the 'ill' member of the family in a supportive and therapeutic manner, because he sees only that person's side of the problem. By seeing other members of the family, he may have a better grasp of the realities, and become a sounding-board or ventilation place, thereby receiving an entirely different perspective."[2]

The Physician's Role

The physician must also consider that anger may not have to be analyzed for hidden meanings such as scapegoating and primary or secondary gain, but is simply what it appears to be—*anger.* It is sometimes easy for a physician to attach hidden significance to the anger demonstrated by his patient and thus avoid taking a look at the fact that the patient may indeed be angry with him. Long waits in the waiting room, inattentiveness by a busy physician—these and other things convey the erroneous message to the patient that "I am not important to my doctor; I'm just a case and not a person." Once again in these situations a direct question often seems to be an effective way of handling the situation: "You appear angry. It seems unlikely that the negative laboratory results would be upsetting. Is there something else bothering you? Perhaps something I have done or failed to do?" Even if the patient should deny angry feelings directed at his physician, the question itself and the accompanying concern will re-establish the rapport so necessary for effective patient care.

Many physicians find themselves provoked at the hysterical or hypochondriacal patient, angry at what they see as an immature attempt for attention. They resent the demands made upon their time, but unless one is aware of his own feelings of anger, one may inadvertently or unintentionally refuse to provide the help which may be available. For this particular patient, psychotherapy may be beneficial.

Using Negative Test Results

The physician may actually use the knowledge of impending negative laboratory results gleaned from a history and mental status examination to establish a closer rapport with the patient. If he says to his patient and the family, "I'm going to run some tests that in all likelihood will be normal, but I want to check this complaint of yours thoroughly," he does several things:

(1) He sets the stage well in advance to discuss the negative laboratory values and their meaning when he receives them.

(2) He bolsters the patient's and family's confidence in him as a clinician. ("After all, Doctor _____ *did* say ahead of time that the results might be negative.")

(3) He accepts the somatic complaint as the entree and does not reject either patient or family because of it.

Predicting laboratory results is difficult and on those occasions when the tests are positive, usually both patient and family are pleased that their doctor checked into their problem even though he thought the results might prove to be within normal limits.

Summary

Certainly, diagnosis and treatment are not the only reasons that a patient and his or her family seek the services of a physician.

This is especially true of the physician whose primary concern and focus is the family. It is crucial to determine what needs bring the patient into the office or clinic if the physician is to begin to anticipate and understand the reaction that negative laboratory test results may bring. With anticipation and understanding, a course of action may be determined.

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Newborns Respond To Human Face

NEWBORN infants less than 10 minutes old respond significantly more to a picture of a normal human face than other visual stimuli, according to a report in a recent issue of *Pediatrics*, the monthly scientific journal of the American Academy of Pediatrics.

The report summarized the results of a survey done with 40 newborn infants. The infants, who had never seen a human face (all of the delivery room attendants were capped, masked and gowned) were taken to a separate room where they were shown four head-shaped cutouts. One of the cutouts was blank. Two others had scrambled versions of human faces, with the eyes, nose, mouth and eyebrows placed incorrectly on the head shape. The fourth stimulus was a cutout showing a normal-looking human face.

The infants followed the normal face with their heads and eyes more often than they followed the scrambled versions of the faces. In turn, they followed the scrambled versions more than they followed the blank head.

The results of the study, the authors said, "may be interpreted as being consistent with an unlearned perceptual organization present at birth in human infants. Moreover, these results suggest that an evolved predisposition to respond selectively to faces may be present at birth."

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IMPORTANT INFORMATION: *This is a Schedule V substance by Federal law; diphenoxylate HCl is chemically related to meperidine. In case of overdosage or individual hypersensitivity, reactions similar to those after meperidine or morphine overdosage may occur; treatment is similar to that for meperidine or morphine intoxication (prolonged and careful monitoring). Respiratory depression may recur in spite of an initial response to Nalline® (nalorphine HCl) or Narcan® (naloxone HCl) or may be evidenced as late as 30 hours after ingestion. LOMOTIL IS NOT AN INNOCUOUS DRUG AND DOSAGE RECOMMENDATIONS SHOULD BE STRICTLY ADHERED TO, ESPECIALLY IN CHILDREN. THIS MEDICATION SHOULD BE KEPT OUT OF REACH OF CHILDREN.*

Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with special caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis. In severe dehydration or electrolyte imbalance, withhold Lomotil until corrective therapy has been initiated.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. Do not exceed recommended dosages. Administer with caution to patients receiving addicting drugs or known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage; strictly observe contraindications, warnings and precautions for atropine; use with caution in children since signs of atropinism may occur even with the recommended dosage. Use with care in patients with acute ulcerative colitis and discontinue use if abdominal distention or other symptoms develop.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing, hyperthermia, tachycardia and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of the gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy, anorexia, restlessness, euphoria, pruritus, angioneurotic edema, giant urticaria, paralytic ileus, and toxic megacolon.

Dosage and administration: ***Lomotil is contraindicated in children less than 2 years old.*** Use only Lomotil liquid for children 2 to 12 years old. For ages 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years, 4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5 times daily; adults, two tablets (5 mg.) t.i.d. to two tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10 ml., 5 mg.) q.i.d. Maintenance dosage may be as low as one fourth of the initial dosage. Make downward dosage adjustment as soon as initial symptoms are controlled.

Overdosage: Keep the medication out of the reach of children since accidental overdosage may cause severe, even fatal, respiratory depression. Signs of overdosage include flushing, hyperthermia, tachycardia, lethargy or coma, hypotonic reflexes, nystagmus, pinpoint pupils and respiratory depression which may occur 12 to 30 hours after overdose. Evacuate stomach by lavage, establish a patent airway and, when necessary, assist respiration mechanically. A narcotic antagonist may be used in severe respiratory depression. Observation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of ½ ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.

SEARLE **Searle & Co.**
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co.
Medical Department, Box 5110,
Chicago, Illinois 60680

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When diarrhea has him reeling...

Diarrhea can hook anyone. When it does, physicians and patients both want prompt control of diarrheal symptoms. Lomotil will usually control diarrhea promptly.

This rapid action can halt the emergency aspect of diarrhea and is comforting and reassuring to the patient. Electrolyte and fluid losses can be corrected while the specific cause of the diarrhea is being determined. If an infective agent is the cause, appropriate specific therapy should be given along with Lomotil.

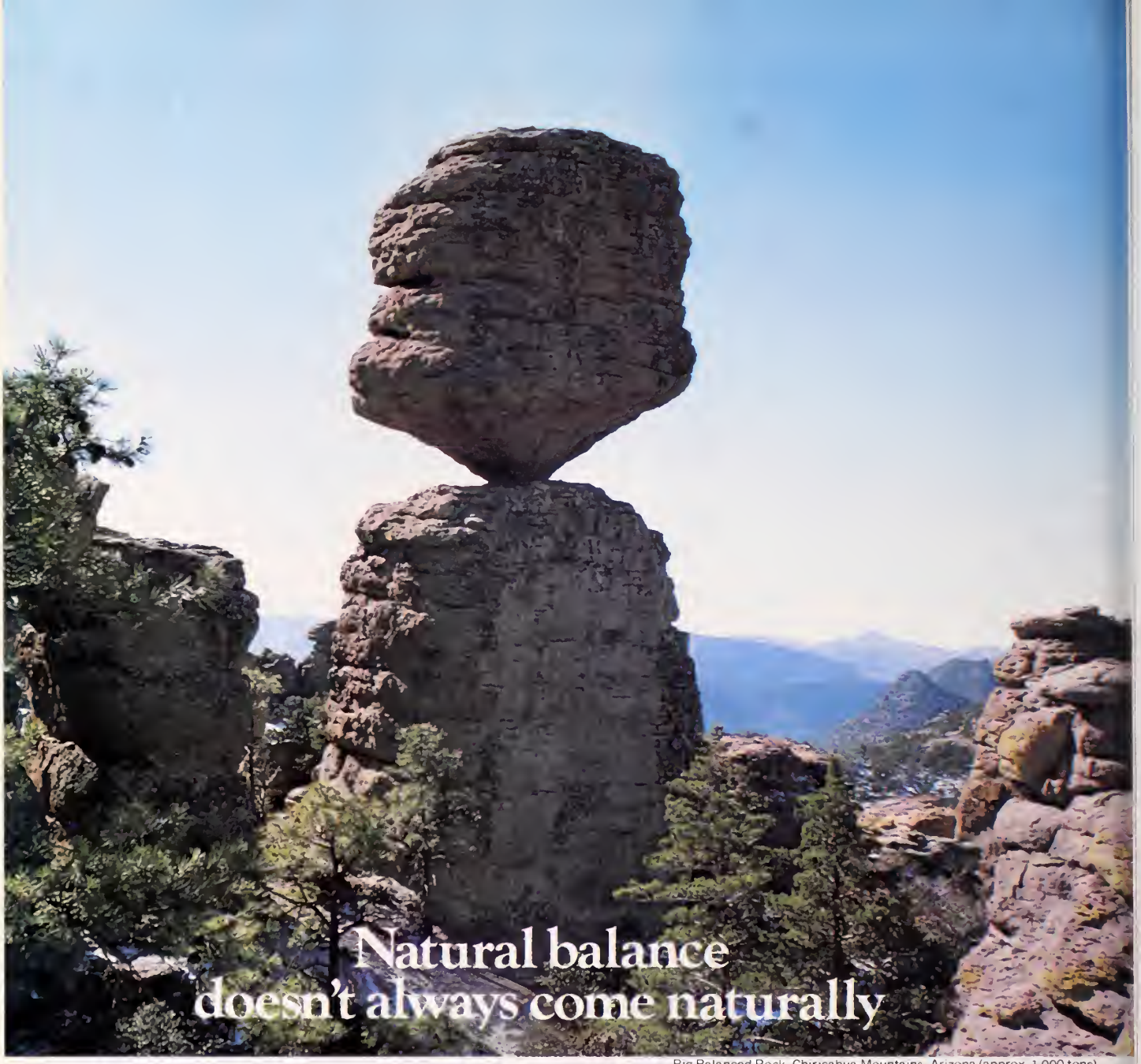
Lomotil is contraindicated in children less than 2 years old.

Lomotil®

TABLETS LIQUID

Each tablet and each 5 ml of liquid contain diphenoxylate hydrochloride 2 5 mg (Warning May be habit forming), atropine sulfate 0 025 mg

holds the line.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

- Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
- Can relieve nausea and vomiting often associated with vertigo.*
- Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
- Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
- Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences – National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy. See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

A Continuing Medical Education Event!

The Ninth Mid-Winter Clinical Conference

Daniel Boone Hotel
Washington and Capitol Streets
Charleston, West Virginia

January 30 - February 1

Such sponsors and participants as the West Virginia State Medical Association; American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia Chapter, American Academy of Family Physicians; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; Section on Orthopedic Surgery, West Virginia State Medical Association; and West Virginia Chapter, American Academy of Pediatrics.

Watch The Journal For Program Details

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

FOR ADVANCE REGISTRATION, please complete the form below and mail to: WEST VIRGINIA STATE MEDICAL ASSOCIATION, P. O. BOX 1031, CHARLESTON, W. VA. 25324.

- -

Please register me for the Ninth Mid-Winter Clinical Conference in Charleston, W. Va., January 30 - February 1, 1976. My $15 registration fee is (is not) enclosed.

I will attend sessions at 2 P. M. Friday, January 30 ..... 8 P. M. Friday .....

9:30 A. M. Saturday, January 31 ..... 2 P. M. Saturday ..... 9:30 A. M. Sunday,

February 1 ..... All sessions ..... .

Name (please print) _____ *Specialty* _____

Address _____ *City* _____

A message from . . .

The President

'Tis the Season

LET'S take five or twenty-five away from the pressing problems present and address ourselves to the most momentous event ever—the birth of Jesus Christ—and the concurrent holiday season—CHRISTMAS.

Barbara, Steve, and I take this opportunity to wish each of you every yuletide blessing and a happy, healthy, and peaceful New Year.

Jack Leckie

JACK LECKIE, M. D.

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

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EDITORIALS

TREATMENT OF INFECTIOUS DIARRHEAS

Elsewhere in this issue of *The Journal* may be found a timely article, "Infectious Diarrheas," by Doctors Le Frock and Klainer. In this editorial, comment will be made only on one phase of this article, namely, the treatment of certain infectious diarrheas.

The authors state that for most cases of transient diarrhea no treatment is required. In many cases the patient who sees a physician is often given medicine to slow intestinal peristalsis and to relieve abdominal cramps. It is pointed out that this approach solves neither enterotoxin-induced water loss nor that of bacterial invasion of the wall of the bowel. In the event of profuse, frequent watery stools, whether accompanied by abdominal cramps or fever, the principal need is fluid replacement. This is a fundamental concept. Drugs, such as Lomotil and paregoric, which retard gut motility should not be prescribed because diarrhea in such cases should be viewed as a protective mechanism.

Fluids given by mouth or by intravenous transfusion replace electrolyte loss and furnish glucose to supply calories and permit absorption of sodium. Administration of intravenous solution has no effect on the diarrhea, but does restore fluid volume; orally administered solution reduces fluid loss and diarrhea.

The authors warn that antibiotics should not be used indiscriminately. For example, they should not be used in gastroenteritis in the treatment of salmonella, for they may convert simple carrier states or cases of gastroenteritis to systemic disease with bacteremia, prolong postconvalescent excretion of salmonella, and encourage the development of selection of resistant strains. On the other hand, in the case of shigellosis, ampicillin should be administered; this drug will shorten the clinical disease and decrease the postconvalescent excretion of the infecting strain. In the case of cholera, tetracycline quickly reduces the fluid loss. Antibiotics should be used, of course, in severe infections as demonstrated by systemic involvement.

In summary, the important factor in the treatment of infectious diarrheas is the replacement of electrolytes and fluids. Drugs, such as Lomotil and paregoric, which retard gut motility should be used sparingly since, in many cases, the diarrhea should be viewed as a protective mechanism.

RADIATION TREATMENT AND THYROID CANCER

The American Hospital Association and the American Medical Association are joining efforts to encourage their members to look at the situation in their communities with respect to the incidence of cancer of the thyroid as a possible consequence of the use of radiation in the 1930's, 40's and 50's to shrink children's infected tonsils, adenoids and thymus glands.

We recommend that steps be taken to ensure that the situation is adequately dealt with in each community.

In the 30's, 40's and 50's, it was acceptable medical practice for physicians to prescribe and administer radiation, most frequently in hospital facilities, to treat certain problems of the neck and face. In recent years, however, research studies[1] have shown a high correlation between this treatment and cancer, with one study[2] showing a seven per cent incidence of thyroid carcinoma in unselected patients with a history of irradiation to the neck area. This percentage is higher than would be expected in the general population and implies a continuing public health problem.

Thyroid carcinoma is usually a very slow growing cancer that poses little immediate danger to life. Nevertheless, there is a need for hospitals and physicians to work together to educate their own colleagues about proper methods of screening and treating this problem, and to ensure that persons in their communities who need attention receive it.

It is necessary that any community or regional program be carefully planned to make certain that guidelines for screening procedures, treatment and release of information are carefully developed and agreed upon by all area providers and that other related groups, such as public health departments, be involved in the planning. A coordinated approach can minimize undue public alarm.

Several possible approaches can be applied to situations at the community level. Large scale "call backs" in which hospitals have searched 30 years of medical records and attempted to contact each person who received treatment, have been tried in some communities. This approach is costly and requires continuing efforts due to the difficulty of locating such records and the mobility of the American society.

Coordinated use of the media should be considered as an approach. For example, in Milwaukee, the Medical College of Wisconsin, the Milwaukee County Medical Complex, the Wood Veterans Administration Hospital, and volunteer physicians have developed a program, and with major assistance from the media over 1,400 persons were screened during the first year. The screening is free and available to all Milwaukee area residents, even though the Milwaukee Medical Center never administered the treatment. Ten per cent of those screened were found to have nodules for which surgery was recommended, and 35 per cent of that group were found to have a thyroid malignancy.

The AHA and the AMA encourage hospitals and physicians to work together in their communities and regions to develop guidelines and procedures for screening persons who may have received this treatment, and to determine the best way to educate the public about seeking screening. — *Guest Editorial by the American Hospital Association and the American Medical Association.*

1. DeGroot, M. D., L., and Paloyan, M. D., E.: Journal of the American Medical Association. 225:487, July 30, 1973.
2. Refetoff, S., and others. New England Journal of Medicine. 292:171, January 23, 1975.

Sugarplums 1975

O.R. bedecked in mistletoe,
Toy garland lights blind those below.
A choir, off key, begins to sing.
Unseen, not there? Our New Born King.

Robed judges clutch retractors as
Prone client, carmined, seems to gasp.
Consumers twelve all meditate.
Tort lawyer starts to celebrate.

Flushed surgeon cries out "Hemostat —
Please, please turn down the thermostat."
"Objection!" stabs the ears, "I'll sue."
A sigh is heard, "How true, how true."

"Quick justice here, no long delay —
Award will be a Christmas day."
Good Lord, above, be generous,
From Pilate's heirs please rescue us.

Stephen D. Ward, M. D.

GENERAL NEWS

Council Approves $10 Assessment For Liability Education Fund

The West Virginia State Medical Association's Council voted at its fall meeting November 2 to assess Association members $10 each to establish a Professional Liability Education Fund.

The Council took its action under provisions of Chapter VII, Section 5 of the Association Bylaws which empower it to "levy special assessments against all active members when such a need has been determined."

Dr. William E. Gilmore of Parkersburg, the Council Chairman, said the Education Fund will be used to inform the State's physicians thoroughly of current and potential dangers associated with malpractice insurance problems; and to enable the physicians, in turn, to properly inform patients, legislators and the public in general of the impact of this "people's problem" on their health care, and the costs of such care.

Council also approved immediate action toward preparation of a brochure and other appropriate educational materials, including information physicians can adapt for speaking opportunities before civic clubs and other groups in their individual communities.

In a long meeting covering a wide range of topics, Council also took action which included:

—Acceptance, in conjunction with the Association's Insurance Committee, of the yearly report by Aetna Life and Casualty Company covering the Aetna-Medical Association Professional Liability Insurance Program.

—Elected to honorary membership Drs. H. D. Chambers of Huntington and G. R. Maxwell of Morgantown, both of whom have retired from active practice; and approved active member-dues exempt status for Drs. Charles S. Lawson, Jr., of Fairmont, retired from active practice because of illness, and Jose R. Canario, Sistersville, who is in military service.

—Reelected Dr. Joe N. Jarrett of Oak Hill to the Editorial Board of the West Virginia Medical Journal for a January 1, 1976-December 31, 1982 term.

—Accepted a detailed financial report covering the Association's operations for the January 1-September 30 portion of this calendar, and fiscal, year.

—Approved allocation, from annual dues of each member, of $5 toward Annual Meeting expenses, and $8 to the Medical Journal.

—Endorsed applications by the Region II Health Planning Association, Inc., for assignment by the National Health Service Corps of two primary care physicians to the New Haven area of Mason County; and two psychiatrists to work from satellite mental health centers in Lincoln, Mason and Wayne counties.

—Gave final approval to a revised reimbursement policy covering travel and related expenses of Association officers, staff, members of committees and others carrying out assigned or official duties; and also approved a paid holidays and vacation schedule for State Office staff.

—Accepted a detailed report from Dr. Harry S. Weeks, Jr., of Wheeling covering work done at the direction of Council in relation to implementation in West Virginia of the 1974 National Health Planning and Resources Development Act; and approved recommendations resulting from discussions held by Doctor Weeks and Mr. Charles R. Lewis, Executive Secretary of the State Medical Association, with West Virginia Hospital Association representatives.

Dr. Jack Leckie, President of the State Medical Association, appointed himself; Doctor Gilmore, the immediate Past President, and Dr. John J. Mahood of Bluefield, President Elect, to an Ad Hoc Committee for Medical-Hospital Relations to serve with their Hospital Association counterparts.

Approved was joint submission by the Medical and Hospital Associations of a letter of intent to the U. S. Secretary of Health, Education and Welfare relative to establishment of an appropriate entity to file an application seeking designation as the Health Systems Agency for West Virginia under provisions of the 1974 statute.

Council acceptance of the report also included approval of a Medical-Hospital Association request to the HEW Secretary for technical assistance in preparation of an HSA application; authority for the Ad Hoc Committee to look into all options under the Federal Law, including possible establishment of sub-area councils; and a suggestion for regular (monthly) meetings with Mr. Thomas R. Tinder, Chairman of a Governor's Task Force on Health, toward continued Association input into implementation of this statute.

The Council gave general attention to probable 1976 legislative action in such areas as professional liability insurance and abortion, and was advised

that a joint meeting of the Legislative Committee and the Ad Hoc Committee on Professional Liability would be held in Charleston on November 23 for specific study of these and related matters.

The detailed Aetna-Medical Association group insurance program report was given by Mr. Robert E. Grimes, Superintendent of the Commercial Accounts Department in Aetna's home office in Hartford, Connecticut; and Mr. Doug Wall, Aetna Account Supervisor, based in Charleston.

A preliminary October 10 meeting of Aetna and Medical Association representatives cleared the way for distribution of the written report to Council and Insurance Committee members in advance of the November 2 meeting; and also for a general advisory to all Association members covering the main features which include a proposed average 59-per cent premium increase for the insurance package for the 1976 policy year.

Those attending the November 2 meeting were Doctor Gilmore; Doctor Leckie; Doctor Mahood; Dr. Joseph A. Smith of Dunbar, Vice President; Dr. Worthy W. McKinney of Beckley, Councilor at Large; and these Councilors: Drs. Robert R. Weiler of Wheeling; Robert J. Nottingham of Morgantown; Ray M. Kessel of Logan; L. Walter Fix of Martinsburg; Robert D. Hess of Bridgeport; Lyle D. Vincent of Parkersburg; Harold N. Kagan of Huntington; W. Alva Deardorff and J. L. Mangus of Charleston; Walter F. Klingensmith of Beckley; L. H. Nefflen of Elkins; and David F. Bell, Jr., of Bluefield; along with Mr. Charles R. Lewis, Executive Secretary, Mr. Custer B. Holliday, Executive Assistant, and Mrs. Mary W. Hamilton, Administrative Assistant, Association staff members.

Also attending the meeting were Dr. Frank J. Holroyd of Princeton, AMA Delegate; Dr. George R. Callender, Jr., of Charleston, AMA Alternate; Dr. Harry S. Weeks, Jr., of Wheeling, AMA Alternate; Dr. James S. Klumpp of Huntington, a Past President; Dr. N. H. Dyer of Charleston, Director of the State Health Department; Dr. Charles W. Merritt of Beckley, Co-Chairman of the Legislative Committee; members of the Insurance Committee including Drs. John T. Chambers of Charleston, James A. Heckman of Huntington and Buford W. McNeer of Hinton; and Mrs. Robert R. Weiler of Wheeling, President of the Woman's Auxiliary to the West Virginia State Medical Association; and Mrs. J. L. Mangus of Charleston, President Elect of the State Woman's Auxiliary.

The following representatives of the Aetna Life and Casualty Company also attended the November 2 Council meeting: Dr. Doug Wall of Charleston, Account Supervisor; Mr. Robert E. Grimes of Hartford, Connecticut, Superintendent of the Commercial Accounts Department; and Mr. James Beuter of Wheeling, Manager of Underwriting.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for 1975 and part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1975)

Date	*Course Title*	*Place*
Dec. 5	Cardiology Teaching Day	Morgantown
Dec. 5, 6	Percutaneous Techniques in Neurosurgery	Morgantown
Dec. 19	Dermatology for the Primary Physician	Morgantown

(1976)

Feb. 25, 26	High Risk Pregnancy Management	Charleston
Mar. 13	Internal Medicine Teaching Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston
Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 16, 17	Drugs and Drug Interaction	Charleston
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30	Department of Pathology—Histochemical Techniques Seminar	Morgantown
Apr. 30-May 1	Seminar on Blood Banking	Morgantown

Most WVU Medical Students Hope To Stay in State

The "great majority" of students at West Virginia University's School of Medicine would prefer to do their postgraduate work, and to enter practice, in this State, the Medical Association's WVU Liaison Committee was told at an October 26 meeting in Morgantown.

Dr. David Z. Morgan, the School's Associate Dean, said that expression was obtained in a survey of students who were then freshmen, sophomores and juniors near the end of the 1974-75 term. Doctor Morgan added that fully one-third of the students in each of those classes indicated plans to enter family practice.

The meeting was in charge of Dr. Robert D. Hess of Bridgeport, the Committee Chairman; and topics discussed ranged from the WVU Medical Center's current and proposed budget to recent developments in the areas of abortion and professional liability.

Dr. Charles E. Andrews, Provost of Health Sciences at the Medical Center, provided the detailed budget review; and also outlined U. S. District Court and other activity which has led to provisions for abortions at the WVU hospital.

It likewise was Doctor Andrews who explained the impact of higher professional liability insurance premiums on Medical Center finances. Higher premium costs incurred in July, he said, pushed the required outlay for physicians at the Medical Center and WVU Hospital from about $143,000 to approximately $600,000 for a one and one-half-year period. Further anticipated increases will add another $200,000 to those insurance premium costs in January, 1976, he predicted.

Mr. Charles R. Lewis, the Medical Association's Executive Secretary, explained activity to date within the Association's own framework, and in conjunction with the Legislative Subcommittee on Health, toward development of professional liability bills for possible introduction into the 1976 legislative session to convene in January.

Dr. John E. Jones, Dean of the WVU School of Medicine, and Dr. John W. Traubert, Chairman of the Department of Family Practice, joined in the wide-ranging discussion of efforts to broaden and strengthen postgraduate training programs in West Virginia.

Doctor Jones reported that 43 WVU-trained physicians were in postgraduate training programs in Charleston in the fall of 1975, as compared to eight two years earlier; and that the number of foreign medical graduates in the Charleston program decreased from 75 per cent of the total two years ago to 25 per cent this fall.

He also reported that 40 of the WVU Medical School's 82 graduates in 1975 stayed in West Virginia for postgraduate medical education. Doctor Traubert said that 25 of the 26 physicians currently in family practice residency programs are American medical school graduates, with the one other resident an American citizen who was graduated from a foreign medical school.

Dr. A. J. Villani of Welch, a Committee member, outlined preliminary discussions he instituted with Drs. Frank J. Holroyd, Princeton, and Charles W. Merritt, Beckley, Co-Chairmen of the Medical Association's Legislative Committee, regarding new abortion proposals for possible introduction in the 1976 legislative session.

He said preliminary efforts have taken into particular consideration recent Federal court rulings, opinions of the West Virginia Attorney General, and recommendations of the West Virginia Obstetrical and Gynecological Society.

Along with Doctor Hess, the following Committee members attended the Morgantown meeting:

Drs. Kenneth J. Allen, Glen Dale; Dewey F. Bensenhaver, Petersburg; W. T. Booher, Jr., Wellsburg; A. Kyle Bush, Philippi; Terrell Coffield, New Martinsville; C. Richard Daniel, Beckley; Del Roy R. Davis, Kingwood; G. Thomas Evans, Fairmont; J. C. Huffman, Buckhannon; Ray M. Kessel, Logan; Ross E. Newman, Mullens; Robert G. Shirey, Lewisburg; L. Dale Simmons, Clarksburg; John W. Traubert, Morgantown; Villani, and J. Hugh Wiley, Morgantown.

WVU Medical School To Boost First-Year Class Size

The West Virginia University School of Medicine plans to increase its first-year class from 84 to 88 students next fall, Drs. John E. Jones and David Z. Morgan, Dean and Associate Dean, respectively, of the School, told the State Medical Association's WVU Liaison Committee during an October 26 meeting in Morgantown. Doctors Jones and Morgan added that this increase appeared to be the maximum possible in relation to existing physical facilities and teaching resources.

Aspen Radiology Conference Set For March 1-5

The sixth annual Aspen Radiology Conference will be held March 1-5, 1976, at the Aspen Institute for Humanistic Studies, Aspen, Colorado. The conference is designed for physicians and scientists interested in diagnostic radiology, nuclear medicine and radiation therapy, and will explore the impact of clinical and technological advances on radiologic practice.

The topics for discussions will include advances in cardiovascular, gastrointestinal, bone and neuroradiology involving a tri-radiological approach.

Continued on next Page

Continued from Page 371

Surveyed each morning will be the advances in a single radiology subdivision as a refresher course with independent parallel diagnostic, nuclear medicine and therapy sessions. Instructive cases, illustrating these topics and previewed by the audience, will be presented for open discussion in the afternoons.

Further information may be obtained from Emanuel Salzman, M. D., Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver, Colorado 80204.

Wheeling Psychiatrist Named Diplomate By Board

Dr. David P. Hill of Wheeling, a psychiatrist and a member of the staff of the Wheeling Clinic, is a new Diplomate of the American Board of Psychiatry and Neurology, Inc. Doctor Hill was listed among other physicians who successfully completed the examination given by the Board in St. Louis, Missouri on October 6 and 7.

Doctor Cooley Director Of State Emergency Medical Services

Dr. Frederick M. Cooley of Charleston has been appointed by Governor Arch A. Moore, Jr., as Director of the newly-created West Virginia Division of Emergency Medical Services (DEMS).

The mission of DEMS will be to provide an adequate number of easily accessible emergency medical services facilities, collectively capable of offering a full range of emergency medical and psychiatric procedures for single episodic events as well as a mass casualty situation.

Doctor Cooley was graduated from Nitro (W. Va.) High School and West Virginia University, receiving his M. D. degree in 1962 from the WVU School of Medicine. A family physician, he was in private practice in Charleston from 1963 to 1966, and comes to his new post after serving as Medical Director of the Charleston Job Corps Center for Women since 1965. He was an associate of the Charleston Internal Medicine Group from 1966 to 1970.

Doctor Cooley has served as Consultant for the West Virginia Emergency Health Service, West Virginia State Department of Health; Consultant, Charleston Emergency Medical Services; and Co-Chairman, Safety Committee, Charleston Area Medical Center.

He is a member of the West Virginia Chapter, American College of Emergency Physicians as well as the following groups:

The Emergency Medical Service Advisory Council, Health Planning Council, Region III, West Virginia; the Planning, Disaster and Safety Committee, Charleston Area Medical Center; State Task Force for Evaluation of Hospital Emergency Medical Services; and EMS Interim Advisory Council, State of West Virginia (Chairman).

State Medical Assn. Announces 'Mayan Adventure' Tour

The State Medical Association is announcing a new vacation tour, "Mayan Adventure," which will visit Central America's capital cities of San Salvador in El Salvador and Guatemala City in Guatemala.

The nine-day tour, planned by INTRAV, will depart from Washington, D. C., on February 20 and return on February 28.

The tour is being offered to members of the State Medical Association and their families. The cost, which includes chartered round-trip jet flights, hotel accommodations, and American breakfasts and dinners, is $658.

"Mayan Adventure" representatives from INTRAV will be available to arrange local sightseeing trips.

For additional information, contact the West Virginia State Medical Association, P. O. Box 1031, Charleston 25324.

Watch For It! A Readership Survey Is On The Way

What do you think of your *Medical Journal?* You'll soon have a chance to tell us—the editors and the staff.

We are preparing a readership survey to permit you to say what you do or do not like; and what we might do to improve *The Journal.* Only a few minutes will really be needed to answer the questions presented, but we hope you'll take as long as you feel necessary to give us a really helpful response.

The survey form will be designed for easy handling as far as removing it from *The Journal* and returning it to us, postage-paid, are concerned.

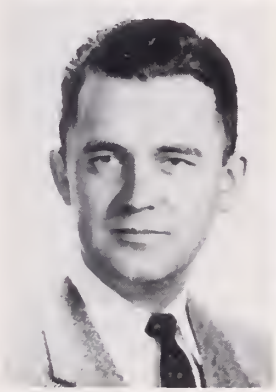
Much time and effort go into each and every edition of *The Journal.* Our goal is simply stated—to give you a publication with quality and content, in scientific articles, general news and other editorial departments, that are informative, interesting and of personal benefit to you.

Look for the readership survey within the next month or so. And perhaps you might like to begin thinking now about what you like, or don't like, about *The Journal.*

After all, this whole project has YOUR interest as the top priority!

Ninth Mid-Winter Conference Program Nears Completion

Plans for the Ninth Mid-Winter Clinical Conference to be held in Charleston January 30, 31 and February 1 were nearing completion in November as the final four scientific speakers were announced by the Program Committee.



Alvin L. Watne, M. D.

Charles E. Turner, M. D.

The continuing education program will be held at the Daniel Boone Hotel, beginning at 2 P. M. on Friday, January 30, and continuing through noon on Sunday, February 1. The conference is sponsored by the State Medical Association in conjunction with other medical groups and voluntary health agencies.

Scientific sessions will be held Friday afternoon, Saturday morning and afternoon, and Sunday morning. The newly-announced speakers and their topics are:

"Blunt Trauma to the Abdomen"—Alvin L. Watne, M. D., Professor and Chairman, Department of Surgery, West Virginia University School of Medicine (Friday afternoon);

"Pancreatitis and Other Non-Surgical Causes Simulating the Acute Abdomen"—Charles E. Turner, M. D., Huntington, gastroenterologist (Friday afternoon);

"Office Gynecology"—Charles A. White, M. D., Professor and Chairman, Department of Obstetrics and Gynecology, WVU (Sunday morning);

"Continuing Medical Education—Who Needs It!" —N. LeRoy Lapp, M. D., Associate Professor of Medicine and Assistant Dean for Continuing Education, WVU School of Medicine (Sunday morning).

Doctors Watne and Turner will be participating in a symposium on "The Acute Abdomen" Friday afternoon. It was announced previously that Donald E. McDowell, M. D., Chief of Surgery, Veterans Administration Hospital, Clarksburg, will speak during the Friday afternoon session.

Dr. D. Franklin Milam, as announced previously, will join Doctors White and Lapp in the Sunday morning session. Doctor Milam, Professor of Surgery and Chairman, Division of Urology, WVU, will speak on the topic of "Office Urology."

Alvin L. Watne, M. D.

A native of Shabbona, Illinois, Doctor Watne was graduated from the University of Illinois, Urbana, and received his M. D. degree in 1952 from the University of Illinois College of Medicine, Chicago. He interned at Indianapolis (Indiana) General Hospital and was a research assistant and resident in surgery at the University of Illinois College of Medicine, Department of Surgery, and the University's Research and Education hospitals.

Certified by the American Board of Surgery, Doctor Watne received an advanced degree (M.S.) in Surgery in 1956 from the University of Illinois College of Medicine. A Fellow of the American Cancer Society, he came to the WVU Medical Center in 1962 from Buffalo, New York, where he was Associate Chief Cancer Research Surgeon. Doctor Watne is Charleston Foundation Professor of Cancer Research at WVU; he was named Chairman of the Department of Surgery earlier this year.

Doctor Watne was President of the West Virginia Division, American Cancer Society, in 1967-68, and is the immediate past Chairman of the State Medical Association's Cancer Committee. He was President of the West Virginia Chapter, American College of Surgeons, in 1972-73, and currently is the Chapter's Secretary-Treasurer. He was Chief of Staff at WVU Hospital from 1972 to 1974, and presently is a member of the Editorial Board of the *Journal of Surgical Research.*

Since 1971 he has been a member of the Committee on Approvals, Commission on Cancer, American College of Surgeons. He received an "Excellence in Teaching Award" from the medical students at WVU in 1970.

Charles E. Turner, M. D.

A native of Huntington and a graduate of Marshall University, Doctor Turner is a member of The Huntington Internal Medicine Group, specializing in gastroenterology and endoscopy. He is Chief of Medicine at St. Mary's Hospital in Huntington, and is a member of the active staffs of Cabell Huntington and Doctors' Memorial hospitals there. He also is consultant in gastroenterology for the Veterans Administration in Huntington.

Doctor Turner was certified by the American Board of Internal Medicine in 1970 (gastroenterology, 1972).

He received his M. D. degree in 1963 from the WVU School of Medicine and served an internship and residencies in medicine at Strong Memorial Hospital, Rochester, New York. During two years of service with the U. S. Navy, 1965-67, he was Acting Chief of Medicine, Ward Medical Officer, at the U. S. Naval Station Hospital, Cherry Point, North Carolina.

Doctor Turner is a member of the Alpha Omega Alpha professional society and the American College of Physicians.

Charles A. White, M. D.

Doctor White, a native of San Diego, California, attended San Francisco State College and the University of California at Davis. After a year of service in the Army, he entered Colorado State University where he received a D. V. M. degree in 1945. He spent six years in the private practice of veterinary medicine before attending the University of Utah, where he received his M. D. degree in 1955.

Doctor White interned at Salt Lake County General Hospital and served a one-year residency in his specialty at Dee Memorial Hospital in Ogden, Utah. He served for two years with the Medical Corps of the United States Navy and then completed his residency in obstetrics and gynecology at the University of Iowa Hospital. He served as a member of the faculty at Iowa from 1961 until he accepted his present position at WVU in 1974.

The author or co-author of a number of scientific publications, Doctor White has been an examiner since 1971 for the American Board of Obstetrics and Gynecology, from which he received certification in 1964.

N. LeRoy Lapp, M. D.

Doctor Lapp, formerly an associate professor in the Division of Pulmonary Medicine, was appointed to the newly-created position of Assistant Dean for Continuing Education at WVU last spring. In his present post, Doctor Lapp has the responsibility of coordinating efforts toward development and accreditation of courses for practicing physicians. He is continuing his teaching and research within the Department of Medicine.

Doctor Lapp resigned last January as Chief of the Cardiopulmonary Unit at the Appalachian Laboratory for Occupational Respiratory Diseases (ALFORD). He had held a faculty position in the WVU School of Medicine jointly with his ALFORD appointment since he came to Morgantown in 1966.

A native of Perkasie, Pennsylvania, he is a graduate of Eastern Mennonite College in Harrisonburg, Virginia, and received his M. D. degree in 1961 from Temple University School of Medicine. His postgraduate training in internal medicine and pulmonary medicine was obtained at St. Luke's Hospital in Bethlehem, Pennsylvania, and at the Mayo Graduate School of Medicine.

A Fellow of the American College of Physicians, Doctor Lapp also is a member of the American Thoracic Society and the American Association for Advancement of Science. He is the author or co-author of a number of scientific publications describing pulmonary research.

Other Conference Speakers

Here are the other speakers, as announced previously, who will appear on the conference program.

Dr. James H. Sammons, Executive Vice President of the American Medical Association, will deliver an address at a physicians' session Friday evening at 8 o'clock. Speaking at a concurrent public session that evening will be Dr. Herman K. Goldberg, Baltimore ophthalmologist, whose topic will be "Dyslexia and the Hyperactive Child."

Prior to Doctor Goldberg's presentation Friday evening, opening remarks will be made by Mrs. Frances Fuller, Supervisor of Consultants in Learning Disabilities for Kanawha County Schools; and Mrs. Hope Stewart, R.N., Coordinator of Health Services for Kanawha County Schools. Mrs. Fuller will mention the dyslexia learning disability problems she encounters, and Mrs. Stewart will make observations about the role of school nurses in working with this disability.

Doctor Goldberg will speak on the same topic at a physicians' session Saturday morning beginning at 9:30.

The speakers and their topics for the 2 P. M. Saturday session will be:

"Prevention and Treatment of Undue Hyperglycemia and Ketosis"—Thaddeus S. Danowski, M. D., Director of Medicine and Director, Institute of Graduate Medicine, Shadyside Hospital, Pittsburgh; and Clinical Professor of Medicine, University of Pittsburgh;

"Office Dermatology"—Peyton E. Weary, M. D., Professor of Dermatology, University of Virginia Medical Center;

"Office Otolaryngology"—Philip M. Sprinkle, M. D., Professor and Chairman, Division of Otolaryngology, WVU.

Other Conference Information

Serving on the Program Committee are Drs. Joseph T. Skaggs and Ralph H. Nestmann of Charleston, Co-Chairmen, and Drs. William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

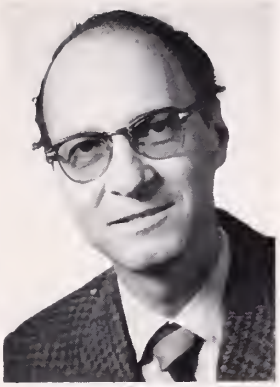
Kanawha Medical Society Offers Social Event

Physicians, wives and others attending the Mid-Winter Clinical Conference are invited to the annual dinner dance of the Kanawha Medical Society which will be held Saurday, January 31, in the Daniel Boone Hotel ballroom beginning at 7 P. M. The affair will include cocktails, dinner and dancing. Dress will be formal.

The cost will be $15 per person. Advance registration is requested. Registrations and advance payment, if desired, should be sent to the Kanawha Medical Society, 405 Atlas Building, Charleston 25301. Payment also may be made at the door. Checks should be made payable to the Kanawha Medical Society.

All registrations should be in by January 27.

Charles A. White, Jr., M. D.



N. LeRoy Lapp, M. D.

The conference has been approved for 12 hours of credit in Category 1 of the Physician's Recognition Award of the American Medical Association; and also has been approved for 12 hours of prescribed credit by the American Academy of Family Physicians.

A registration fee of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents.

The final details of the program, including the physicians who will preside at the scientific sessions and organizations holding meetings in conjunction with the conference, will appear in the January issue of *The Journal.*

Association-Aetna Claim Review Panels Being Established

As part of the professional liability insurance agreement between The West Virginia State Medical Association and The Aetna Life and Casualty Company, four Claim Review Panels are being established. It is anticipated by Aetna and the Association leadership that the mutual education derived will significantly improve the medical malpractice situation in this State.

It is expected that a majority of questionable cases will be reviewed by one of the four panels. Panel members are being nominated by local medical societies, and will include specialists in the areas of orthopedics, obstetrics-gynecology, general surgery, anesthesiology, family practice, and radiology—the areas where claim experience is most frequent.

Under the process, the panel chairman receives the medical records and reports, and in turn assigns them to a panel member whose specialty corresponds to the specialty involved in the claim. This physician is asked to review the material, and consult with the defendant and any other doctor. He may request additional information from the Aetna claims department, if such a need exists.

The Aetna defense attorney and the defendant-physician attend the panel review. All information discussed becomes the defense attorney's work product, and is confidential. The physician assigned to the case presents the entire case to the panel.

The panel members ask questions and discuss the entire matter informally. The physician involved then describes his medical management of the case, at which time panel members may again ask questions. Throughout the discussion, the defense attorney may make recommendations.

After the review, the panel will vote, making one of the following recommendations: (1) settlement, (2) compromise for a reasonable figure, or (3) defend.

While the ultimate decision of whether to defend or settle lies with the defendant-physician, the information and recommendation of the panel is used to guide the defense attorney in the handling of the claim.

Of equal importance is the hope that the information and experience derived from panel participation will be disseminated, and will be to the benefit of all physicians and patients in their mutual relationships. The goal is ultimately to lessen the gravity of the medical malpractice problem.

Conference On Geriatric Medicine For The Practitioner At Duke

A one-day conference on Geriatric Medicine for the Practitioner will be held on December 13 in the Duke University Hospital Amphitheatre.

The scientific presentations, following registration from 8:30 to 9 A. M., will be:

"The Care of Older Patients: Practical Problems in Office Management," "Evaluating the Confused, Disoriented and Demented Patient," "The Management of Depression in Older Patients," "Problems of Drug Management;"

"Sexuality in Late Life," "Counseling the Family of Older Patients," and "The Role of the Physician in the Long-Term Care Institution."

The conference, co-sponsored by the Duke University Center for the Study of Aging and Human Development, the American Geriatrics Society and the Duke Family Medicine Program, reflects the concern of practicing physicians in their medical management of the geriatric patient. The program areas were selected after extended discussions with a number of physicians actively engaged in family practice. The faculty will be headed by Dr. E. W. Busse, President of the American Geriatrics Society.

Registration is limited. The fee is $35. Credit for six hours in Category 1 of the AMA's Physician's Recognition Award has been granted. American Academy of Family Practice credit has been requested. For further information contact Dorothy Heyman, Executive Secretary, Center for the Study of Aging and Human Development, Box 3003, Duke University Medical Center, Durham, North Carolina 27710.

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Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1975

Dec. 5-9—International College of Surgeons, Honolulu.

Dec. 6-10—Am. Society of Hematology, Dallas.

Dec. 6-11—Am. Acad. of Dermatology, San Francisco.

Dec. 8-10—Southern Surgical Assn., Hot Springs, Va.

1976

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

Jan. 30-Feb. 1—AMA Congress on Medical Education, Chicago.

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

Feb. 23-26—Am. College of Cardiology, New Orleans.

March 5-10—Am. Acad. of Allergy, San Juan, P. R.

March 17-20—AMA Regional Meeting, Lexington, Ky.

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

April 28-30—Medical & Chirurgical Faculty of the State of Md.

April 28-May 1—W. Va. Chapter, ACS, White Sulphur Springs.

April 29-May 2—ASIM, Atlanta.

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 26-July 1—AMA Annual Meeting, Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

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WVU Medical Center
—News—

DIETITIANS are the health professionals whose knowledge of foods, nutrition principles, biochemistry, physiology, and biological and social sciences qualifies them best to plan optimal nourishment for everyone.

They work in hospitals, nursing homes, schools, feeding programs, health agencies, teaching positions, child care institutions, business, international organizations, consultant services and, sometimes, in private practice.

The need for more dietitians in West Virginia has long been recognized. Now a growth program at West Virginia University may help meet those needs more rapidly.

Already well along toward their goal of becoming dietitians are the 14 juniors who this fall became the first class accepted into WVU's Coordinated Undergraduate Dietetic Program (CUDP).

When they graduate in 1977, they'll receive, as have many students before them, the traditional B.S. degree with a major in dietetics from the Division of Family Resources of WVU's College of Human Resources and Education. But because of their work experience during their CUDP period of upper-division study, they can become members of the American Dietetic Association without an extra internship period, and they will be eligible immediately for the registration examination required before they can list R.D. (registered dietitian) after their names.

Applicants who had completed the minimum of prescribed courses at the freshman and sophomore level at WVU or other accredited colleges and universities were interviewed by the CUDP admission committee if they had a grade point average of 2.5 or better, on a scale of 4.0 based on all work attempted.

Elimination of the after-graduation internship period through integration and concentration of clinical experiences with undergraduate course work reflects careful planning of the CUDP by its sponsors, the College of Human Resources and Education's Division of Family Resources and WVU Medical Center's University Hospital.

University Hospital will be the hub for much of the classroom and most of the clinical experience of CUDP students, since simultaneous studies in the same setting provide a better opportunity to develop expertise in the delivery of nutritional care.

As do WVU students in dentistry, medicine, medical technology, nursing, pharmacy and physical therapy, the CUDP students learn in the professional setting of the Medical Center.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

One-Half Million Patient Meals

Approximately one-half million patient meals and 1,227,200 meals in two cafeterias and three private dining rooms are served annually at University Hospital. This setting affords CUDP students the opportunity to learn food systems management, including food acceptance, recipe standardization, employee training, cost controls and storeroom revision.

In addition, there are patient-centered clinical conferences, dietetic consultations with inpatients and their families, as well as with patients who visit University Hospital's Outpatient Department. Counseling and teaching sessions are held regularly for diabetic patients.

A variety of community experiences also is arranged for CUDP students and supervised by registered dietitians. These include, for instance, nutrition education sessions with children, teachers and parents at a Head Start facility, participation in the Morgantown Congregate Meals Program for the elderly, nutrition counseling of patients at a nursing home in Morgantown, development of menus and educational materials for the local Meals-on-Wheels program, and participation and assistance of the lay Diabetic Association.

The American Dietetic Association approved the CUDP program in June after making a site visit to the WVU campus in April. S. Jane Goodman, Ph.D., R.D., is the program's coordinator.

ACP Regional Meeting

The President Elect of the American College of Physicians, Jack D. Myers, M. D., was among the participants in the annual combined West Virginia and Western Pennsylvania Regional Meeting of the ACP which was held in Morgantown October 31 and November 1.

Doctor Myers, a faculty member at the University of Pittsburgh, was the speaker for the dinner on Friday evening at the Quality Inn.

The Friday morning and afternoon and the Saturday morning sessions were held in the main auditorium of the West Virginia Medical Center.

Members of the West Virginia Chapter of the American Society of Internal Medicine also participated in the meeting.

West Virginia State Medical Association

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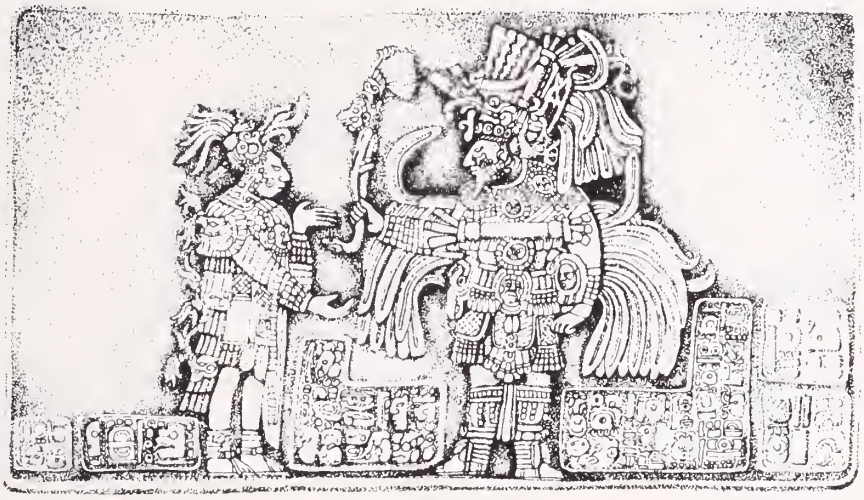

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The Month in Washington

• From the Washington Office of the American Medical Association.

THE American Medical Association brought the concerns of American medicine to the attention of the Congress a number of times during the season of the Harvest Moon.

At a hearing before a House Judiciary Subcommittee looking into the charge that Federal agencies may be taking too much power into their own hands, the AMA testified that "although potentially inherent in many agencies, abuses have become more obvious in the health agencies during the past 10 years."

Raymond T. Holden, M. D., Chairman of the AMA Board of Trustees, said the many health programs Congress approved during this time "because of the complexity of the solutions inherent, were often mere skeletons. In its haste to provide operational programs, Congress often has allowed executive agencies and bureaus to add the flesh."

As a result, Doctor Holden said, the final program often is "unrecognizable" from what Congress had in mind. He charged there has been intentional non-conformance with Congress' intent, "an insatiable appetite for more regulation" in which the bureaucracy "runs amok by attempting to regulate any activity which touches upon, influences, or is affected by the Congressional program." The time is long overdue to put a stop to regulatory abuse, the AMA official told the Subcommittee.

Doctor Holden pointed to the Health, Education and Welfare Department's actions on Utilization Review. After withdrawing the initial proposal for hospital pre-admission certification, strongly opposed by the AMA, the Department went ahead with final rules that were "equally objectionable" in requiring review of all patients within 24 hours. Doctor Holden said provisions of the basic Medicare law were "improperly invoked" and irrelevant provisions of other programs were "imperiously used" by HEW. The AMA brought suit and was successful in obtaining a preliminary injunction upheld on appeal.

Edgar T. Beddingfield, M. D., Vice Chairman of the AMA's Council on Legislation, told the Subcommittee the AMA is backing a measure to amend the Administrative Procedures Act to require agencies to follow certain procedures. The bill, introduced by Rep. Thomas Kindness (R-Ohio), calls for adequate time for comment, and expands the type of governmental actions that would come under the rule-making regulations. The bill (H.R. 10301) requires the agency to include "the rationale in accepting, rejecting, or accepting in modified form the comments received by the interested parties." Doctor Bedingfield said this is to "assure that the agency not indulge further in its practice, often utilized, of rejecting out-of-hand comments with which it does not agree . . ." Any final rule substantially changed from its proposed form would have to go through the process as a proposed rule to allow comment, he said.

Improved Health Of Indians Urged

The AMA told Congress it is time to improve the health of Indians.

"The Association believes that today, when the nation appears ready to correct some of the wrongs done the first Americans, there is an opportunity to bring the health status of the American and Alaskan native to the level of the general population, rather than remaining decades behind."

Robert B. Hunter, M. D., a member of the AMA Board of Trustees, said the Indian Health Service "has done well with what it has, but it does not have enough." Doctor Hunter, testifying before the House Subcommittee on Indian Affairs, endorsed legislation before the House and Senate to improve health services for Indians.

In the past, increases in the budget for Indian health services have done little more than keep up with inflation, the physician told the lawmakers.

Based on extensive studies by the AMA and others, Doctor Hunter said, one solution to the manpower needs must be to attract more Indians to the health professions. He supported provisions in the measures to train more Indian physicians through scholarships and in other ways.

Changes were recommended to allow employment of private health professionals on a contract basis to meet backlogs in health care services needed by Indians. An immediate construction and modernization program for health facilities was endorsed as well as provisions requiring Indian participation in planning and program operation.

He urged passage of a provision for a one-year study to investigate alcoholism and mental health among Indians.

THE WHEELING CLINIC

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Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.

Orthopedic Surgery:
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Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
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Sheldon Widlan, M. D.

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David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelson, Ed D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
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J. N. Aceto, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

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Joann Green, P. A.
Michael G. Simon, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
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George Orphanos, M. D.

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Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

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P. B. Gogo, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Obituaries

WILLIAM F. BECKNER, M. D.

Dr. William F. Beckner of Huntington, an eye, ear, nose and throat specialist, died on October 5 in a hospital there. He was 92. A native of Indian Mills, in Summers County, Doctor Beckner went to Huntington in 1920 after practicing in Wilder and Dante, Virginia.

He received his M. D. degree in 1911 from Maryland Medical College. He was an honorary member of the Cabell County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Doctor Beckner was instrumental in developing the Cammack Children's Center in Huntington, having served as its Board Chairman for more than two decades.

Surviving are the widow and one daughter, Margaret W. Beckner, an assistant professor of psychiatry at the University of Texas Southwestern Medical School in Dallas.

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JOSEPH U. ROHR, M. D.

Dr. Joseph U. Rohr of Charleston died on November 2 in a hospital there. He was 91. Doctor Rohr, one of the first specialists in urology in the Charleston area, continued in limited general practice until several years ago after a medical career which began in Charleston in the early 1920's.

He was Superintendent of the Andrew S. Rowan Memorial Home at Sweet Springs from 1948 to 1957, after which he retired briefly, moving to Roanoke, Virginia. There he worked part-time for the Veterans Administration for several years, then returned to Charleston to practice on a limited basis.

A native of Alum Bridge, in Lewis County, Doctor Rohr received his M. D. degree in 1914 from the College of Physicians and Surgeons of Baltimore. He was an honorary member of the Kanawha Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; two daughters, Mrs. Margaret Washington of Charleston and Mrs. Virginia Hunt of Columbus, Ohio; and a brother, H. B. Rohr of Weston.

* * *

RICHARD B. TALBOTT, M. D.

Dr. Richard B. Talbott of Martinsburg died on October 18 in a hospital there. He was 81. Doctor Talbott was a past President and Secretary of the Eastern Panhandle Medical Society; he also was a past President of the medical staffs of both the City and King's Daughters hospitals in Martinsburg.

A native of Beverly, in Randolph County, Doctor Talbott received his undergraduate education at Davis and Elkins College and West Virginia University. He received his M. D. degree in 1924 from the University of Maryland School of Medicine, After interning at Wheeling Hospital, he practiced in Randolph and Preston counties before going to Martinsburg in 1930.

A veteran of World War I, Doctor Talbott was an honorary member of the Tygart's Valley Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; one son, Richard B. Talbott of Inwood (Berkeley County); a daughter, Miss Thelma Mae Talbott, Hagerstown, Maryland; one brother, Lewis W. Talbott, Flemington (Taylor County); and two sisters, Mrs. Forrest Pierce and Mrs. Alvin H. Wagner, both of Elkins.

* * *

JESSE R. TUCKWILLER, M. D.

Dr. Jesse R. Tuckwiller, a retired physician of Lewisburg, died on November 1 in a Charleston nursing home. He was 88. Doctor Tuckwiller practiced in the Fairmont area for more than 50 years before retiring in 1966.

A native of Lewisburg, Doctor Tuckwiller was graduated from West Virginia University and received his M. D. degree in 1910 from the College of Physicians and Surgeons of Baltimore. He was an honorary member of the Marion County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include three sons, Jesse R. Tuckwiller, Jr., of Charleston; Eugene B. Tuckwiller, Martinsburg, and Donald W. Tuckwiller, Richmond, Virginia; a sister, Mrs. Frank Nash of Alderson; and five brothers, Frank, Edward H., Eugene A. and Ross Tuckwiller, all of Lewisburg; and Dr. Pat A. Tuckwiller, Charleston.

* * *

ROBERT A. ASHWORTH, M. D.

Dr. Robert A. Ashworth of Moundsville, who was President of West Virginia State Medical Association in 1924, died on November 5 in a Beckley hospital. He was 95.

A native of Flat Top, in Mercer County, Doctor Ashworth was graduated from Concord College and received his M. D. degree in 1912 from the Medical College of Richmond. He interned at McClung Hospital in Richwood and moved from there to Moundsville to practice general medicine and surgery.

Doctor Ashworth, who also was a past Secretary of the State Medical Association, was an honorary member of that Association, the Marshall County Medical Society and the American Medical Association. He was a former director and Chairman of the Board of Mercantile Bank and Trust Co. in Moundsville, moderator of the Northern District Baptist Association, and a trustee of Alderson-Broaddus College in Philippi.

Survivors include four sons, Dr. Harold B. Ashworth of Glen Dale, Robert J. and John C. Ash-

worth, both of Beckley; and Charles V. Ashworth of Geneva, Ohio; two daughters, Mrs. Dorothy Howell of Westchester, Ohio and Mrs. Elizabeth Fulkerson of Charlotte, North Carolina; three brothers, David D. and Joseph Ashworth, both of Beckley, and L. L. Ashworth of Florida; and one sister, Mrs. George W. McKinney of Petersburg.

ACP Infectious Disease Update Course In Valley Forge

The American College of Physicians (ACP) will sponsor a three-day postgraduate course entitled "Update in Infectious Diseases," January 28-30, in Valley Forge, Pennsylvania. The course, held in conjunction with the Medical College of Pennsylvania, Philadelphia, will take place at the Sheraton Hotel.

The course will present an up-to-date review of prevention, diagnosis, and therapy of certain changing or unusual aspects of infectious diseases. Topics of discussion will include newer antibiotics, syphilis, leprosy, respiratory viruses, and bacterial infections. Emphasis will be on pathophysiology, diagnosis, and management based on recent developments in microbiology, pharmacology, and clinical investigation. ACP postgraduate courses have been approved by the American Medical Association Advisory Committee on Continuing Medical Education.

Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvia Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Waadford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
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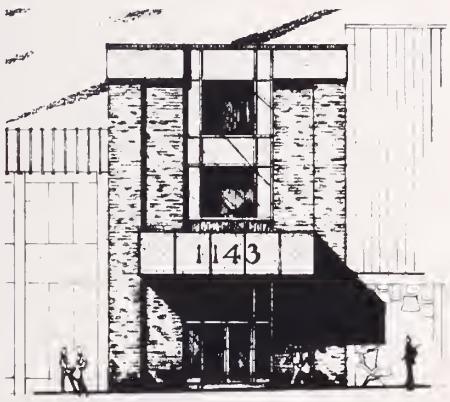

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Annual Report of the Committee on Maternal Welfare

THE meeting of the Maternal Welfare Committee of the West Virginia State Medical Association was called to order by the Chairman at the Heart-O-Town Motor Inn, Charleston, West Virginia, on Sunday, May 18, 1975. Those present were Frederick H. Dobbs, M. D., Chairman, and the following members: Kenneth J. Allen, M. D.; Clarence H. Boso, M. D.; George L. Grubb, M. D.; Robert P. Pulliam, M. D.; and Patrick C. Williams, M. D.

The Chairman expresses his appreciation for the splendid cross-section of physicians available for this important study. The members attending the meeting represent a hard core of interested obstetricians who are professionally qualified to renew the case abstracts and to understand the facts contributing to each maternal death, and to make intelligent recommendations for the benefit of the interested physicians and for the edification of the physicians who practice obstetrics in the State.

The Committee is extremely grateful to the interested physicians who are involved in maternal deaths who take time from their busy practices to complete a detailed questionnaire and forward copies of case histories and copies of autopsy reports. The administrators and record librarians also are to be commended for their cooperation in forwarding complete case records on the maternal deaths.

The data obtained from the different sources are abstracted as a hypothetical case and the name of the patient, the interested physician and hospital are confidential and not available to anyone except the Secretary and his departmental secretary. All sources of information are used to determine a sudden demise in a complicated delivery and are obtained from the patient's chart, the doctor's notes, the resident's history, and especially the nurses' notes.

The Bureau of Vital Statistics, under the direction of Dr. N. H. Dyer and Mr. Paul Shanks, is the primary source of our maternal death information. The death certificates of all women in the child bearing age are checked by a special clerk in the Bureau and any death certificate having any relationship to pregnancy is photostatted and referred to the Secretary for his scrutiny. If the certificate is classified as a maternal death the proper letters are written and a questionnaire forwarded to the physician. In borderline cases a letter is written for clarification.

The Secretary reported that there are prenatal and delivery services available for indigent families in 40 counties of the State and there were 820 deliveries authorized for the fiscal year. At present the E.C.D. program is active in eight other counties. The Director of the statewide Prenatal and Delivery Service expects to be in all counties of the State by 1976. Family planning clinics are established in 45 counties with a total of 1,263 clinic sessions in one year and a total of 195,918 patients in the program. This reflects the trend of our times in the establishment of additional prenatal and delivery service clinics and the expansion of family planning clinics to more than three fourths of the counties in the State.

Following the business portion of the meeting the Committee then proceeded to the study of 12 abstracts of maternal deaths available at this time.

Case No. 366 — RUPTURED INTRACRANIAL ANEURYSM IN A 34 AND ONE-HALF-WEEK PREGNANCY.

A 19-year-old white, never-married female was admitted to the hospital in an unconscious and comatose state. The patient was 34 and one-half weeks in her first pregnancy and her condition upon admission was considered grave. About 12 hours prior to the admission, she developed sudden headaches and within three hours time she was unconscious and comatose. A neurosurgeon was called in for consultation and she was on assisted respirations. She was responsive only to deep pain with bilateral long tract signs upper and lower extremities. The right pupil was markedly dilated. Blood pressure was 188/120; pulse, 90. The patient had a right carotid angiogram with cross compression which did not grossly demonstrate the aneurysm but showed evidence of spasm of the proximal medial intracerebral vessels. Spinal fluid did not show any evidence of CNS infection. There were some scattered red blood cells.

The patient's hospital stay was one of gradual deterioration and she expired three days later, still on the respirator and no response. There was no autopsy. Final diagnosis: ruptured intracranial aneurysm.

Comment: Rupture of a vessel during pregnancy brings up the concept that there is an inherent weakness of the blood vessels during the pregnant state. After the patient suffered the ruptured aneurysm the blood pressure was recorded at 188/120 with a pulse of 90. This reading certainly classifies this as acute hypertension and may have contributed to the spontaneous rupture. Unfortunately, the prenatal record is not available because of poor cooperation with the attending obstetrician. Whether she had severe preeclampsia which was recognized and treated, or unrecognized and untreated, will

never be known. The Committee felt that surgery should have been attempted if at all possible.

Case No. 367—RHEUMATIC HEART DISEASE WITH ACUTE MYOCARDIAL INFARCTION WITH EMBOLISM TO THE CORONARY ARTERY.

A 16-year-old white, married female was admitted to the hospital—dead on arrival. There is no recorded data on her length of pregnancy or any history of any prenatal visits to a physician, clinic or hospital. An autopsy was performed by a coroner, revealing acute myocardial infarction of the anterior septal wall of the left ventricle and congested heart disease with massive pulmonary edema. The female fetus, which was stillborn, was removed from the mother's body at the time of the autopsy.

Comment: The Committee reasoned that our educational standards are high enough that no one should attempt to go through the prenatal period without medical supervision. There are adequate medical facilities in the county of her residence, and they were available without charge. With the past history of rheumatic heart disease and a probable heart lesion, this patient could have been evaluated as to her cardiac reserve, and her potential for a normal or operative delivery. Unfortunately, a very small percentage of patients will not seek medical assistance until a severe complication develops and it is too late to attack the complication with competent medical therapies. This is what happened in this particular maternal death.

Case No. 370—TERMINAL LUDWIG'S ANGINA IN A SIX-MONTH PREGNANCY.

A white, never-married female, age 19, was admitted to the hospital with a terminal case of Ludwig's Angina. The patient was six months in her first pregnancy and her condition upon hospital admission was considered terminal. While a patient in the hospital, she developed some vaginal bleeding and was checked by an obstetrician, in consultation. The bleeding was minimal and had little to do with the course of this severe anginal infection. The patient expired on the tenth hospital day and there was no autopsy. She remained undelivered. The patient had no prenatal care from any physician, clinic or hospital.

Comment: This maternal death (and the previous one, No. 367) is a good example of self-neglect and the responsibility for the maternal death should be placed upon the patient herself. The Committee reasoned that had the patient been under the care of a physician, she would have reported her sore throat immediately and would have received treatment. This may have prevented the terminal angina. In this case, the patient was unmarried and this would explain her reluctance to seek prenatal care sooner. The responsibility for this maternal death is placed upon the patient and upon her family, who should have recognized a serious complication associated with the pregnancy and then sought medical care to treat the serious condition.

Case No. 372—PREMATURE RUPTURE OF THE OLD CLASSICAL CESAREAN SECTION SCAR.

A 28-year-old white, married female, a Gravida 4, Para 3, was admitted to the hospital in great pain and in a semi-comatose condition. The due date was several months away, but, because of the size of the fetus and the question of accurate dates, she had been scheduled for a repeat cesarean section a week from her admission date. It was estimated that she was 32 weeks in her fourth pregnancy and it was observed that she had had two previous classical cesarean sections. There had been a laparotomy five months before her admission for an ovarian cystoma and it was noted that the site of the two previous cesarean sections had left a very thin uterine scar. The patient had adequate prenatal care with a weight gain of 14 pounds.

The patient had a sudden and severe pain in the abdomen and was brought to the hospital in a semi-comatose condition and in severe shock. No blood pressure was obtainable but the fetal heart tones were noted and the maternal pulse was present. Shortly after admission the patient went into cardiac arrest. She was immediately intubated and taken to surgery for a cesarean section. At section, it was found that the uterus had ruptured through the previous cesarean section scar and the abdominal cavity was filled with blood. The fetus was out of the uterus and had expired. With resuscitation the patient's heart action was restored. She received blood transfusions, aramine, epinephrine and steroids. The patient was moved from the delivery suite to the intensive care unit with dilated pupils, thin thready pulse and shallow respirations. She was placed on an ice mattress, given blood, cardiac drugs, steroids, antibiotics and fibrinogen. She began bleeding from the GI tract and from the incision. The patient gradually worsened and expired 13 hours after hospital admission. She remained comatose all during her hospital stay. There was no autopsy.

Comment: The Committee agreed that the direct obstetric cause of death was premature rupture of the old classical cesarean section scar. It also recognized that the two previous cesarean sections should have been performed with the low transverse incision.

Over the years, there have been many ruptures of the pregnant uterus, the result of the outmoded classical cesarean section incision. Fortunately, these obstetrical accidents have not all been fatal, but in the memory of the older members of the Committee, no fetus has survived a rupture of the uterus, especially if the fetus had been expelled into the abdominal cavity. This patient was 28 years old and the two previous sections had been performed in the past 10 years. The Committee members were appalled that anyone would perform a cesarean section and be so inexperienced that he would use the classical incision approach for a modern cesarean section. The responsibility for this maternal death is placed upon the surgeon who performed the first cesarean section.

Case No. 376—SEPTIC SHOCK FOLLOWING SEPTIC ABORTION FROM A RETAINED IUD IN A FOUR AND ONE-HALF-MONTH PREGNANCY.

A white, married female, in her early twenties, a Gravida 3, Para 2, was admitted to the hospital in active labor. She was 20 weeks in her third pregnancy and had become pregnant with an intrauterine device in place. The IUD was intact upon hospital admission. The day prior to admission she began bleeding and as the bleeding continued, labor became evident and she was admitted in very active labor. Upon admission she passed a fetus spontaneously. Examination upon admission revealed: temperature, 102.2 degrees F; pulse, 120; respirations, 20; and hemoglobin, 10.3 grams per cent. She was taken to surgery where the IUD was removed without difficulty. The condition of the patient upon admission was considered grave, and after the removal of the IUD she started a steady downhill course. She had numerous blood gases and blood counts. X-ray revealed a lower lobe pneumonia with marked elevation of the right hemidiaphragm, which could be an inflammatory process or an embolus. The colon was markedly dilated. The following day the right base infiltrate persisted with an accumulation in the left lobe as well. The next day the x-ray revealed extensive infiltrate in the left lobe consistent with pulmonary hemorrhage. The following day she became cyanotic with a falling blood pressure. She was transferred to the intensive care unit and a pulmonary angiogram was started, but before it could be completed the patient expired. There was an autopsy.

Autopsy: (1) Septic shock secondary to septic abortion with E-Coil septicemia, (2) Thrombosis, right ovarian vein, (3) Disseminated intravascular coagulation, (4) Pulmonary congestion, (5) Intra-alveolar hemorrhages, and (6) Passive congestion of the liver.

Comment: The Committee was unanimous in placing responsibility for this maternal death upon the physician who failed to remove the IUD when she was first seen in her third pregnancy. The literature is replete with reports of maternal deaths from septic abortion with retained IUDs. The worst offender has been the Dalkon Shield, but there are many reports of septic abortion with the older type of IUD. The consensus of opinion is to remove the IUD as early as possible after the diagnosis of pregnancy has been established.

Case No. 379—SELF-INDUCED ABORTION IN A MENTALLY INCOMPETENT PERSON.

A 33-year-old black, married female was admitted to the hospital dead on arrival. The county coroner discovered a two and one-half-month pregnancy with a perforation of the uterine wall, the result of a self-inflicted wound in an attempt to abort herself. Investigation revealed that the patient had been a mental patient in a State hospital a year ago and had become withdrawn again. There is no history of any medical attendance.

Comment: While the circumstances surrounding this maternal death seem hopeless, the Committee felt that somewhere in her therapy the possibility of a sterilization should have been considered. We do not have any background on her obstetric status, but it appears that the pregnancy triggered an attempt to abort the fetus and end the pregnancy. If this was the case, then a sterilization might have given her a better opportunity to recover from the mental breakdown and eliminated her fear of pregnancy, which is so inherent in some women.

Case No. 380—SPONTANEOUS RUPTURE OF THE STOMACH IN A SIX-MONTH PREGNANCY.

A white, married female, age 30, was admitted to the hospital with persistent headaches, nausea, and vomiting. Because of the persistent headaches, and continuous nausea and vomiting, which had not responded to the usual therapy of sedation and antiemetics, her condition became serious and this necessitated her admission. She was six months in her present pregnancy. There was no prenatal data available for this patient. The admission examination revealed a normal hematology with a hematocrit of 35.7 per cent, hemoglobin, 12.1 grams per cent, and WBC, 14,400 with a normal differential. Urinalysis showed a 2 plus glycosuria from a previously administered intravenous infusion. Serology was non-reactive and the chemical profile studies were normal.

The first day she responded to Compazine mg. 10, I.M. and Tylenol No. 3 for the vomiting and the headaches. On the second day she did not take much food but preferred liquids. The nausea and vomiting had improved. On the third day, the headache returned during the day but the vomiting remained under control with sedation. She continued to get intravenous fluids. On the evening of her death she was found comatose in bed, with shallow and infrequent respirations, deeply cyanotic and in deep shock. Efforts to revive her were futile and she expired. There was an autopsy.

Autopsy revealed the principal cause of death was a chemical peritonitis due to rupture of the stomach without evidence of peptic disease. There was also found a glioma of the right lobe of the brain which undoubtedly caused the headaches, nausea and vomiting. The rupture of the stomach with resulting peritonitis is still unexplained. It was thought that the precipitous demise was from the shock state, the result of the chemical peritonitis following the rupture of the stomach.

Comment: The Committee reasoned that the brain tumor causing the nausea and vomiting was the major cause of death, although the peritonitis from the ruptured viscus precipitated the demise. Without the prenatal data, we do not know when the vomiting started, or the pattern it followed once it began; the attending physician, however, should have become suspicious of an underlying factor causing the vomiting in a late second-trimester pregnancy. She may have had ocular symptoms of pressure in the right side of the brain, along with

the symptoms that necessitated her admission. Unfortunately, she expired before a neurological work-up could have been accomplished even if the attending physician had suspected a brain tumor.

Case No. 382—RUPTURED ECTOPIC PREGNANCY IN A 20-WEEK GESTATION.

A white, divorced female, in her mid-twenties, a Gravida 1, Para 0, and 20 weeks in her first pregnancy, was admitted in a state of severe shock. She had a history of having severe epigastric pain after eating supper, collapsing and vomiting some blood. The admitting physician began treating her for a perforated ulcer or pancreatitis by giving a transfusion and starting naso-gastric suction. The patient was noted to be approximately five months pregnant and the uterus was consistent with a five-month pregnancy with no vaginal bleeding. After adequate resuscitation from shock, the blood pressure rose to 100/70 and the pulse came down to 94. There is no history of her having any prenatal care by any physician, clinic or hospital. She had had an appendectomy.

The following morning an obstetrician was called in consultation and found the patient to be in moderate distress with the abdomen quite soft, and the uterus the size of a 20-week pregnancy. There was slight tenderness over the right flank. Pelvic examination revealed a closed cervix, no vaginal bleeding and no suspicion of a pelvic mass at that time. Her temperature was 104 degrees F; pulse, 160, and respirations, 50. A provisional diagnosis of intrauterine pregnancy was made and she was treated accordingly with antibiotics, intravenous fluids and naso-gastric suction. At 9:30 P.M. it was discovered that the patient had not passed any urine that day, and in checking back she had passed only 100 c.c. prior to that. A central venous catheter was inserted and the central venous pressure was only 2 cm. of water. The patient received several rapid transfusions, I.V. fluids and antibiotics, but her hemoglobin was falling steadily from 9.8 grams to 6.3 grams. She also received I.V. Mannitol and I.M. Lasix and, in two hours, she put out 400 c.c. of urine.

Because of the falling hemoglobin and no improvement, the abdominal cavity was explored and a ruptured ectopic pregnancy was found with the fetus, placenta and amniotic sac lying under the liver. All bleeding points were secured and tied. She received 2000 c.c. Lactated Ringers Solution with two pints of whole blood. The blood pressure starting coming up to 90/80 with the pulse at 100 to 110. She was cyanotic before the operation and continued cyanotic during the procedure. She was transferred to the intensive care unit postoperatively where she suddenly collapsed and died. There was no autopsy.

Laboratory Data: Blood culture showed no growth in one week. She was Group O, Rh positive, Serum Electrolytes Glucose 95 mg. per cent; BUN; 35 mg. per cent, Sodium 141; Potassium 2.8; Chloride 110; VDRL—non-reactive; preoperative hemoglobin was 8.5 grams per cent.

Pathology Report: A female fetus was a crown heel length of 16 cm. and estimated to be of 15 weeks' gestation with the other specimens commensurate with the findings of an ectopic pregnancy.

Comment: Several factors of preventability were recognized by the Committee. The patient was a divorced 26-year-old female who lived in a smaller town than that in which the admitting hospital was located. She had no prenatal care from any physician, clinic or hospital and, because she was from 15 to 20 weeks in her pregnancy, she certainly knew she was in a pregnant state. Had she consulted a physician early in pregnancy and had been examined, it is very possible that he might have suspected an ectopic pregnancy, say at two and one-half or three months, when there would have been a marked difference in size between the non-pregnant uterus and the ectopic pregnancy tumor. When the ectopic pregnancy grew to a five-month size, the pelvic examination was complicated by the tumor (the pregnancy) and the state of shock of the patient, which precluded an accurate and revealing pelvic examination. The patient was cyanotic, in severe shock and in great pain, so that an examination that would reveal a non-pregnant uterus alongside a large abdominal tumor would be impossible. The physical findings were further complicated by the fact that ectopic pregnancies do not often reach a five-month size before rupture. Abdominal pregnancies often go to full term but that is not the rule in ectopic pregnancies.

The Committee felt that in addition to patient responsibility for the maternal death there was some physician responsibility. One member felt that repeated vaginal examinations might have revealed that the non-gravid uterus might have been palpated away from the pelvic tumor, and if that was impossible, the physician might have felt a "hemogenous" feel to the pelvis due to the pelvis being filled with blood clots. The general consensus of the other members was that the patient should have undergone surgery sooner, but the internal bleeding was not suspected until her hemoglobin continued to fall. It was felt that she reached a hemoglobin level from which she had no point of return and that the fluids administered after surgery were not sufficient to combat the blood loss, the shock and the collapse of the patient.

Case No. 383—HEPATITIS FROM ANESTHESIA.

A white, married female, age 24, a Gravida 3, Para 2, was admitted in active labor and estimated to be at full term. At the end of the first day, she had irregular contractions every 20 to 25 minutes and reached a dilation of 3 cm. The following day contractions were irregular with no further dilation. On the third day, the membranes were ruptured in the morning. Labor became progressive and she delivered that evening. The placenta resisted all efforts to be delivered with cord traction and fundal pressure, so a hand was introduced and

the major portion of the placenta delivered manually. Upon inspection, several cotyledons were missing. These could not be removed with gauze wrapped around the glove so, using the same anesthesia, the patient was removed to surgery, where a hysterectomy and appendectomy were performed. It was estimated she lost 1,000 c.c. of whole blood in removing the placenta and an additional 1,000 c.c. during the hysterectomy. The placenta was removed 22 minutes following delivery; the hysterectomy was completed two hours and 39 minutes after delivery.

In 1969, she delivered a viable female and required three transfusions during this pregnancy. In 1971, she delivered a viable male after a two-day hard labor and required two transfusions during this pregnancy. The bone marrow test was negative. The diagnosis of placenta accreta was confirmed by the surgical specimen both grossly and microscopically.

The postoperative course was unremarkable for the first three days, but on the fourth day she became febrile, so ampicillin was started. On the sixth postoperative day the urine became dark. The following day scleral icterus was noted, and on the ninth postoperative day the liver was no longer palpable. By noon of that day she exhibited bizarre, inappropriate behavior; by 4 P.M. she was somnolent and, by 6 P.M., she became unresponsive. Because of her gradually decreasing sensorium and the diagnosis of hepatic coma, she was transferred to another hospital, where she had a steady, progressive downhill course in spite of intensive care with plasma phoresis and L-Dopa therapy. On the 18th day she had cardiac arrest and died. There was no autopsy.

Comment: The development of the hepatitis is the key factor in this maternal death. The Committee members were agreed that the halogen anesthesia was a possible factor, but some of the members felt that the long labor, the hard delivery and the marked loss of blood, both in attempting to remove the placenta and during the total hysterectomy, were probably contributing to the development of her hepatitis. One member felt removing the appendix in the face of major surgery subjected a critical patient to extra anesthetic time, adding the risk of intra-abdominal infection. Two Committee members felt that antibiotics should have been started when the diagnosis of placenta accreta was made. The Committee agreed that the death was in part due to physician responsibility.

Case No. 384—POSTPARTUM HEMORRHAGE.

A white, married female, age 24, a Gravida 3, Para 3, was admitted to the hospital in a terminal condition. She was 15 days postpartum from her cesarean section and had a history of profuse vaginal bleeding for three days prior to admission. The patient had had a normal prenatal course, but at full term, the fundus was so enlarged with a frank breech presentation that a cesarean section was performed with the delivery of a viable male fetus weighing 10 lbs., 6 ounces. Following a normal postpartum course, the patient was discharged on the sixth postpartum day with the incision healed and in good condition. On the 12th postpartum day she began a profuse hemorrhage associated with the passage of clots. The bleeding continued for three days and when she developed profound shock and became unconscious, the family brought her to the hospital. During the next two and one-fourth hours, she received Dextran, 1,000 c.c.; whole blood, 1500 c.c., oxygen and supportive treatment. In spite of these heroic efforts, the patient expired, which was 15 days after the section and two and one-fourth hours after hospital admission. There was no autopsy.

Comment: This maternal death was the family responsibility. The attending physician made a special note that the family adopted a blase attitude toward the bleeding and it wasn't until she became unconscious that any medical help was requested. This happened in a very rural area, but location of a home in the country does not mean that everyone living out of the city is necessarily as ignorant as this family. This could very well have happened in a city, but communications are a little better and hospitals closer. The Committee felt this is a terrible waste of a young mother who had a good start on a family career.

Case No. 385—RENAL FAILURE FOLLOWING POSTPARTUM ECLAMPSIA.

A black, non-married female, age 18, a Gravida 1, Para 0, was admitted to the hospital in active labor. She was 39 weeks in her first pregnancy and the condition upon admission was considered good. She had three prenatal clinic visits with a blood pressure of 120/80 (average) and a weight gain of 11 pounds in seven weeks. Urinalysis and hematology were well within normal limits. She was admitted in active labor with a blood pressure of 162/80, and delivered in two hours. Four hours later the patient had a blood pressure of 190/100 and suffered stomach pains. Seven hours after delivery she had a convulsion with a blood pressure of 222/110, and was given Demerol and MgSO4 I.M., but the convulsions continued. An hour later the blood pressure dropped to 90/70, but with medication and IV fluids, it ranged around 140/80 to 160/100. She vomited blood, fluid and bled from the gums and the injection sites. The pulse was 160, respirations, 28, and was non-responsive. She continued to vomit until a Levin tube was inserted. It was removed and the vomiting returned, so it was reinserted. She received blood transfusions, intravenous glucose and sedatives, but at the end of the day the urine output was almost shut down. In spite of huge doses of intravenous penicillin and intravenous fluids, the output averaged about 40 c.c. daily, and her general physical condition was deteriorating. On the fourth hospital day, she was transferred to a medical clinic. The clinic attempted to correct the blood chemistry. A neurologist performed retrograde pyelograms which showed no blockage of the

ureters. An internist was called in consultation and he had the patient transferred to a hospital where dialysis was available. The patient was found to be a diabetic postpartum and was started on Insulin IV. She had six to seven days of oliguria. The staff set-up plan for therapy was to begin in the morning, but the patient had a cardiac arrest and died after a hospital stay of nine hours. There was no autopsy.

Comment: Postpartum eclampsia is the most severe form of toxemia and this patient gave the attending physician a chain of symptoms which were not recognized. She had an admitting blood pressure of 120/80 and, after delivery, it rose to 162/82. Also, she complained of stomach cramping for four hours. Then, three hours later, she had her first convulsion. For seven hours, these symptoms do not mean much to any physician or nursing staff unless the physician is there to observe the cause of the stomach cramping and the sudden rise in blood pressure. He might have observed a beginning tension and irritability in the patient and that the patient was getting anxious and upset. Too often we observe a 40 mm. rise in the blood pressure postdelivery; if this is the case, some of the Committee members order large doses of barbituates and monitor the pressure until it either falls or becomes elevated. Eclampsia is so rare these days that one does not think of it in terms of active treatment against that specific potentiality. In this case, the convulsions continued and it was in this area that the Committee members felt that treatment was inadequate. Heavy doses of morphine, barbituates and MgSO4 to the point of tolerance were indicated. Then, the therapy could be directed toward promoting vasodilation, promoting diuresis and correct hemoconcentration. The Committee felt that the uncontrolled convulsions caused renal and hepatic damage which further therapy could not combat. But in the absence of an autopsy the real outcome will never be known.

Case No. 386—UNCONTROLLED DIABETES WITH CARDIAC ARREST.

A white, married female, age 21, a Gravida 2, Para 0, was admitted to the hospital in serious condition because of uncontrolled diabetes. The patient was 31 weeks in her second pregnancy and her condition upon admission was considered poor. The pregnancy and diabetes had been followed with eight prenatal office visits. At eight weeks she was controlled with NPH Insulin 50u/100, having had two recent spells of insulin reaction. Fasting blood sugar was 197, weight, 120 lbs., and blood pressure, 130/90. Insulin was reset for 40 units NPH u/100. At 22 weeks, she was seen in the emergency room with a blood sugar of 168 with emesis. At 31 weeks, she was admitted through the emergency room with a blood sugar of 650. She was given Tigan 2 c.c. because of nausea and history of nausea and emesis for two days prior to admission, and was started on IV saline. Urine specimen showed sugar one plus with a large amount of acetone.

During the next four days every effort was made to control the diabetes. The blood sugar was dropped to 135 in seven hours with insulin and saline, but then it accelerated to 450, then 550 at times. The third day the FBS was 292 and the next day, 331; an x-ray of the chest revealed a patch of consolidation with pneumonitis. She was given terramycin 250 IM b.i.d. On the fourth hospital day the membrane ruptured spontaneously and she went into regular labor. She was moved to the labor room, which was equipped with an external Corometric Monitor. The blood sugar was 506; blood pressure, 190/120. The entire clinical picture and projected program of management was reviewed. Lasix 2 c.c. I.M.; MgSO4 20 grams in a liter of normal saline and dropped 105 drops per minute. Blood pressure dropped to normal levels. Dextrose 5/W was given and covered with 10 units of normal saline. 50 u of regular insulin were given.

As she was almost fully dilated, the anesthetist, an M.D., elected to give a small dose of a solution for saddle block. The dilation was complete; low forceps were applied and, as the head was lifted over the perineum, the anesthetist declared a major problem in not having any voluntary breathing. Immediate resuscitative measures were instituted. The fetus was cyanotic and sent to the newborn nursery, but it expired in minutes. Code Blue was instituted and a specialist in internal medicine responded, but in spite of all heroic measures, the patient did not respond. There was no autopsy. This was four days after hospital admission.

Final Diagnosis: cardiac arrest, bilateral basilar atelectasis, diabetes mellitus, diabetic acidosis, dehydration, pregnancy (seven months), hyperglycemia, and left lower pneumonitis.

Comment: This maternal death supports the theorem that diabetes and pregnancy cause serious complications as the patient nears full term. Several members of the Committee felt that such a brittle diabetes should have been under the control of an internist. Because of the respiratory arrest during delivery, others felt that the patient should be delivered under local or pundendal block instead of spinal. In spite of the four days in which the hospital staff had to bring the patient under control, unfortunately, she never did reach a level of safety where she could withstand the trauma of labor and delivery. The high elevation of the blood sugar, the acidosis and the emesis—all contributed to the terminal state which culminated in the respiratory arrest.

Respectfully submitted,

Frederick H. Dobbs, M. D.
Chairman

County Societies

MERCER

The Mercer County Medical Society met on October 20 at the West Virginia Hotel in Bluefield. The guest speaker was Dr. Morgan E. Scott, from the Radford (Virginia) Mental Health Clinic, who gave an interesting and informative talk on drug abuse, with emphasis on alcohol abuse, in adolescence.

Doctor Scott reviewed statistics at three year intervals from 1969 through 1975, indicating that the age for alcoholics in adolescence had decreased from an average of 19 years in 1969 to probably 16 years in 1975. He indicated that the problem of adolescent alcoholism in southwestern Virginia is great.

The Society voted to send resolutions of bereavement to the families of two recently deceased members, Drs. Daniel Hale and E. W. McCauley.—David F. Bell, Jr., M. D., Secretary.

* * *

MONONGALIA

The Monongalia Medical Society met on October 7 at the Hotel Morgan in Morgantown. The speaker was Dr. J. Darrel Smith, whose topic was "Recognition and Treatment of Thyroid Problems in Infants and Children."

Dr. Isaiah A. Wiles reported for the Public Health Committee that 4,032 persons in the county had been screened for hypertension. He showed a milk carton from the Chico All-Star Dairy which now carries the American Academy of Pediatrics recommendations for immunization for all children.

Dr. Nathaniel F. Rodman, Jr., reported on a discussion with Dr. Irvin M. Sopher, the new State Chief Medical Examiner.—H. Summers Harrison, M. D., Secretary.

* * *

TYGART'S VALLEY

The Tygart's Valley Medical Society met on October 16 at Mellie's Restaurant in Philippi. There were 38 physicians and their wives in attendance for the social hour and reception for Dr. Jack Leckie of Huntington, President of the State Medical Association, and his wife, Barbara.

Doctor Leckie addressed the Society on the problems and practice of medicine in West Virginia. He stressed the importance of peer review but stated that regulations should be by the medical staff at its own level. Doctor Leckie also stressed the importance of communication with patients and the improvement of the doctor's image in the

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community. He urged all doctors to become involved in their local and State societies as well as the AMA.

There was a discussion of the new malpractice insurance rates, and Doctor Leckie explained same. It was felt that legislation for control of malpractice insurance should be introduced.—A. Kyle Bush, M. D., Secretary.

NYU Offers Congenital-Rheumatic Heart Disease PG Course

The New York University Postgraduate Medical School and St. Vincent's Medical Center of Richmond, Staten Island, will offer a course on "Recent Advances in Medical and Surgical Management of Congenital and Rheumatic Heart Disease," January 9 through February 13.

The course is designed to assist pediatricians, and also general practitioners and internists who care for young patients, in recognizing and managing their heart disease and in understanding the methods involved in surgical therapy.

The course will be given at St. Vincent's Medical Center, 355 Bard Avenue, Staten Island, New York, on Fridays from 9:10 to 10:30 A. M.

Dr. Albina A. Claps, Director of Pediatrics at St. Vincent's Medical Center, and Dr. Eugenie F. Doyle, Professor of Pediatrics and Director of Pediatric Cardiology at New York University Medical Center, are course directors.

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The Fall Conference and Board of Directors meeting of the Woman's Auxiliary to the West Virginia State Medical Association was held October 22 and 23 in Clarksburg at the Sheraton Inn. Mrs. Charles S. Harrison and Mrs. Paul E. Gordon, both of Clarksburg, served as Co-Chairmen of the event; and Mrs. Robert R. Weiler, Wheeling, President of the State Auxiliary, presided at all business sessions.

Mrs. Harry T. Linger of Clarksburg was in charge of pre-conference reservations and Mrs. Harrison and Mrs. Gordon were in charge of registration, which began at 1 P. M. Wednesday, October 22, followed by the initial meeting of the conference at 2 P M.

"S.O.S." Project

One of the features of this session was a film presentation entitled "S. O. S.—Safety on the Streets." The film, recently introduced at the American Medical Association Auxiliary Fall Conference in Chicago, is concerned with women and children learning to defend themselves if assaulted.

Mrs. Weiler announced that the "S.O.S." project is being adopted by the State and local auxiliaries this year in the form of offering members a hand-held alarm device to prevent or stop attacks on the streets. When touched on the top, the device, in the form of a metal tube, emits an ear-splitting shriek. Known as a "Mini-Guard Alarm," it not only can be heard several blocks away but also—temporarily and painfully—deafens the assailant. The alarm can be ordered by contacting county auxiliary presidents or Mrs. Weiler. The cost is two dollars.

On Wednesday evening a social hour and dinner were enjoyed by members of the Board of Directors, with the Auxiliary to the Harrison County Medical Society and husbands serving as hostesses and hosts. Entertainment was provided by two local Auxiliary members, Mrs. James L. Bryant, who presented vocal selections from "The Sound of Music," accompanied by Mrs. George Cleghorn; and Mrs. M. V. Kalaycioglu, who demonstrated various styles of Oriental dance. Mrs. Victorino D. Chin, assisted by Mrs. Kalaycioglu and Mrs. Lawrence H. Mills was in charge of arrangements for the dinner.

The final conference session was held on Thursday morning following an 8:30 A. M. breakfast, at which Mrs. Harry T. Linger and Mrs. Herman Fischer served as hostesses.

Officers and Committee Chairmen

State officers and committee chairmen present and issuing reports included: Mrs. J. L. Mangus of Charleston, President Elect; Mrs. D. Sheffer Clark, Huntington, Recording Secretary; Mrs. Louis W. Groves, Jr., Richwood, Treasurer; Mrs. M. Bruce Martin, Huntington, Parliamentarian; Mrs. Gary G. Gilbert, Huntington, Western Regional Director; and Mrs. David Z. Morgan, Morgantown, Eastern Regional Director.

Committee Chairmen: Mrs. Paul Francke, Jr.; Mrs. P. A. Tuckwiller, Mrs. J. Dennis Kugel and Mrs. John A. B. Holt, all of Charleston; Mrs. William T. Lawson, Mrs. Joseph T. Mallamo and Mrs. Robert G. Janes, all of Fairmont; Mrs. Howard Weiler and Mrs. Robert O. Strauch, both of Wheeling; Mrs. Robert T. Bandi, Triadelphia; Mrs. Richard G. Starr and Mrs. John E. McKenzie, both of Beckley; Mrs. Harry F. Coffman, Keyser; Mrs. Winfield C. John and Mrs. Larry C. Smith, both of Huntington; Mrs. George A. Curry, Morgantown; and Mrs. Harrison, Clarksburg.

County auxiliary officers present were: Cabell, Mrs. Charles E. Turner; Kanawha, Mrs. George A. Shawkey; Marion, Mrs. John C. Turner; Monongalia, Mrs. Thomas J. Tarnay and Mrs. Richard S. Kerr; Potomac Valley, Mrs. James C. Bosley, Mrs. Harry E. Coffman and Mrs. E. G. Friera; and Harrison, Mrs. Julian D. Gasataya and Mrs. Aristotle Rabanal.

Eight past presidents of the State Auxiliary were in attendance.

The Spring Conference and Board of Directors meeting of the State Auxiliary will be held in April, 1976, at Oglebay Park in Wheeling.

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. The 1976 Roster of Members will be prepared and placed in the mails shortly after the first of the year and we would very much like for your correct address to appear in same. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

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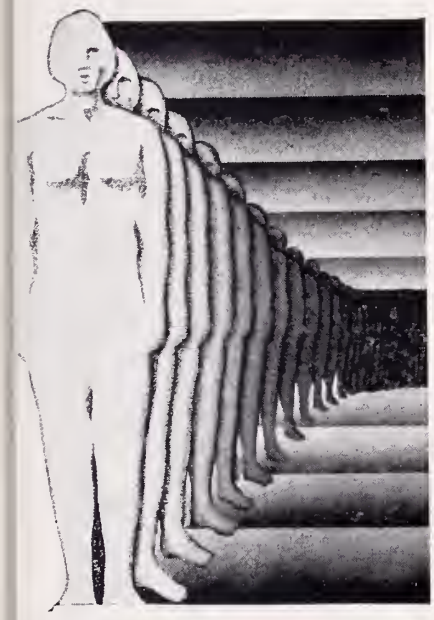

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Precautions: Use with caution in patients with impaired renal or hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme (Stevens-Johnson syndrome), skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and stomatitis. *C.N.S. reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, polyarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Usual adult dosage for acute, painful phase of urinary tract infections is 4 to 6 tablets initially, then 2 tablets four times daily for up to 3 days. If pain persists, causes other than infection should be sought. After relief of pain has been obtained, continued treatment of the infection with Gantrisin (sulfisoxazole) may be considered.

Note: Patients should be told that the orange-red dye (phenazopyridine HCl) will color the urine soon after ingestion.

How Supplied: Tablets, each containing 0.5 Gm sulfisoxazole and 50 mg phenazopyridine HCl —bottles of 100 and 500.

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